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Original Articles.

NON-DIPHTHERITIC PSEUDOMEMBRANOUS RHINITIS.*

BY J. PRICE-BROWN, M.D.

TORONTO, ONT.

This is a non-specific inflammation of the mucous membrane lining the nasal passages. It may be acute, chronic or recurrent, and is attended by a deposit of fibrinous exudation. This exudate presents the anatomic features of a false membrane, being imposed upon the epithelium, without involving to any great extent, the deeper tissues. That this condition should ever exist as an independent affection is still a matter of doubt with some observers.

Abbott, in the "Transactions of the Pathological Society of London" (1893), says that "cultivation from the supposed false membrane of the nose always contained the Klebs-Loeffler bacillus, although in some cases it was thought to be attenuated. Evidence is accumulating to show that these cases of so-called fibrinous rhinitis are merely mild local manifestations of the specific diphtheritic bacillus." Professor Kanthack, in "Allbutt's System of Medicine" (1896), says, "a curious and important pathologic condition is the so-called rhinitis fibrinosa. Clinically such cases are not diphtheria, but pathologically and bacteriologically they are. In the cases I personally examined, I obtained, as others did, large numbers of virulent diphtheria bacilli." Musser, "Medical Diagnosis" (1896), says that in the diphtheritic form of acute rhinitis, the diagnostic symptom is the presence of false membrane in the nose. He says the nasal discharge is very acrid in diphtheria and is almost sure to cause excoriation of the upper lip. On examination a dirty gray membrane is found within the nostril. Bacteriologic examination confirms the diagnosis. M. Eeman, at the Belgian Society of Otology and Laryngology, 1897, maintained the unity of pseudomembranous rhinitis. He believed that this affection was always due to the Loeffler bacillus, reporting twelve cases which bacteriologically seemed to support his position. M. Buys at the same time endorsed M. Eeman's view. In five out of six cases he found diphtheria bacillus, while he believed the negative result in the sixth case arose from faulty technic. Osler, in his "Practice of Medicine" (1898), refers to seventy-seven cases of membranous rhinitis, in which thirty-three were found to owe their origin to Klebs-Loeffler bacilli. All ran a benign course. False membrane was limited to the nose in nearly all. Constitutional symptoms were slight, and infection of other children was slight also. "On the other hand," he says, "nasal diphtheria is apt to be most malignant. . . . Glandular inflammation being intense. . . . The infection may be primary through the nose."

The quotations from these authors would seem to indicate that they consider all cases of pseudomembranous rhinitis, whether mild or severe, as really of diphtheritic origin, and that the lighter cases, characterized by absence of systemic symptoms, are in reality the result of an attenuated virus. Notwithstanding this strong expression of opinion, many cases have been recorded, which can not but impress upon the mind the fact that membranous rhinitis does sometimes occur, of a purely non-diphtheritic character. A few of these cases it will be as well to briefly relate.

In 1894 (*Journal of Laryngology*) Brun Murdock reported a case of recurrent membranous rhinitis. The patient was a woman, aged 33, a subject of hay-fever. During a period of little over a year, she had five different attacks of fibrinous rhinitis, without any indications of true diphtheria. A number of microscopic examinations were made, but all failed to show any Klebs-Loeffler bacilli, though there were a number of micrococci of minor moment. In 1894, Schiffer read before the Belgian Society of Otology and Laryngology, a paper on the "Pathogenesis of Non-Infectious Croup of the Nasal Mucous Membrane," with a history of a case. The membrane was confined to the nasal cavities. The general symptoms were slight, save for the nasal membranous obstruction. Microscopic examination proved the absence of the Klebs-Loeffler bacillus. There was no sign of the disease being infectious. Middlemas Hunt, at the meeting of the British Medical Association, 1898, in a paper on "The Relation of Fibrinous Rhinitis to Diphtheria," reported four cases of fibrinous rhinitis. He said the first case "was in every way a typic one, as the patient remained in good health, had no albumin in the urine, no glandular enlargement and no subsequent paralysis." His second case was that of a medical man, in good health, but who sought advice on account of nasal obstruction and profuse watery discharge. He had not been attending any cases of diphtheria, but had assisted in a post-mortem in a case of ulcerative endocarditis. Both nasal passages were filled with thick white membrane, which left a bleeding surface when torn off with the forceps. Considering it to be a case of simple fibrinous rhinitis, no culture was made. Two weeks later the man had severe pharyngeal diphtheria followed by paralysis. In Middlemas Hunt's third case, the child's nasal passages were lined with membrane, but there was no deposit on the pharynx or tonsils. On removal of the membrane, the surface was raw and bleeding. There was, however, no fever, no albumin in the urine, no enlargement, and culture showed no Loeffler bacilli, but the presence of staphylococci and streptococci. Subsequent inquiry elicited the fact that she, with several other children associated with her, had suffered from tonsillitis a month or two previously, and that

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her case had been followed by paralysis of the palate. The fourth case recorded was followed several weeks later by diphtheria in the family.

In summing up the history of these cases, Hunt seems to be of the impression that all but the first were cases of nasal diphtheria; and he doubts the possibility of distinguishing the two diseases clinically, using these words: "I am afraid there are no clinical characters on which we can rely in distinguishing the two diseases, and our one method is to turn for help to the skilled bacteriologist." In the light of the history he gives, and judging further by his "one method," his third case could scarcely be one of nasal diphtheria, whatever might be said of the second and fourth.

Richard Lake (*Laryngoscope*, September, 1898) gives the history of a case of chronic pseudomembranous rhinitis, on the right side, in a man aged 54. The patient, a hay-fever subject, had unusual pallor, and there was present within the nares, together with the false membrane, a chronic discharge of coagulated secretion. Treatment only had a temporary effect; and on returning for examination ten months later the disease had increased in severity. The right nasal cavity was filled with a gelatinous mass, resembling the "white" of a plover's egg; and from it was obtained a pure culture of staphylococci pyogenes aureus, without other septic germs of any kind whatever. As Lake so pointedly says: "It is only within the last few years that a distinction has been made between diphtheria nasi and membranous rhinitis," but in Bosworth's words of years ago: "What the germ is, the pathologic laboratory has not yet told us."

Staphylococcus pyogenes aureus is the one usually found in a culture of the simple membranous disease; but neither can it nor the streptococcus claim to be its special progenitors, as the pathologic conditions in which these organisms are found are almost infinite. Bacteriologically, however, we can exclude diphtheria; and it is safe to say that any nasal pseudomembrane which on careful investigation fails to exhibit the Klebs-Loeffler bacillus, may be set down as non-diphtheritic, particularly when supported by the clinical history of the case.

That primary nasal diphtheria does sometimes occur, can not now be doubted; but still, it is exceedingly rare. Lennox Browne, in his work on "Nose and Throat" (1899), says that statistics have proven that it only occurs two times in a thousand cases, while nasal diphtheria, by extension from the pharynx, occurs in 21.3 per cent. of all cases.

On the western side of the Atlantic, I believe it is even still more rare. In a professional experience of thirty years, I have never seen a case of primary nasal diphtheria; and in answer to inquiry among a large number of my professional brethren, with one exception, the same answer has been returned. This exception occurred in the experience of my friend, Dr. T. F. McMahon. He has seen two cases; both occurred in children. In the one, the throat being unaffected, a culture was made from the nasal false membrane, abundant Klebs-Loeffler bacilli being found. In this case the child died. In the other, the Klebs-Loeffler bacilli were likewise obtained from a nasal culture, the throat at the time being unaffected. Subsequently the membrane extended to the pharynx and tonsils. This child recovered. In each case diphtheria appeared in other members of the family.

In reference to the results of observations by recent writers, upon non-diphtheritic membranous rhinitis, I might quote the following. McBride says: "The intense local discomfort, together with the absence of all constitutional symptoms in typic cases, forms an easily recognized combination." Hamilton Potter says: "The membrane is firmly attached to the parts beneath, and is only detached with violence, leaving a bleeding surface." Walsham says: "The points chiefly to be relied on, in distinguishing fibrinous rhinitis from nasal diphtheria, are the absence of constitutional symptoms, of glandular enlargement, of albumin in the urine, and of paralytic sequelæ." Lennox Browne says: "This membrane may be removed without exposing a bleeding surface. Risk of contagion is remote. Cultivation and inoculation experiments give negative results. The neighboring glands are not involved, and no one has found the Klebs-Loeffler bacillus."

The fact is that in simple membranous rhinitis, except for the nasal obstruction, symptoms are largely absent. The nostril—the disease being frequently unilateral—may be completely blocked by the false membrane, but the discharges are unirritating, and at the same time lack the peculiar odor for which diphtheria is distinguished. The clear, whitish color of the membrane remains unchanged, and in some cases it can be removed without producing hemorrhage, though the latter is not in accord with my own experience in idiopathic cases.

With reference to the statement that a similar false membrane is always produced by the application of the galvano-cautery to the mucous surface, it must be remembered that the protective covering is only formed upon the spots cauterized, whereas, in fibrinous rhinitis, the whole mucous lining may be affected. Sometimes, however, the effect of cauterization is not so limited, and the burning of a single spot within the nasal cavity may induce the formation of false membrane throughout the fossa. Although this fact is well known, the literature upon the subject is so meager, that the report of a case may not be without interest.

In September, 1895, a young lady, aged 25, came to me for treatment for hay-fever. On examination there was nothing unusual in the appearance of the nasal passages except that the inferior turbinates were very much enlarged. Otherwise they had the ordinary pale purplish hue usually found in such cases. Under cocain I burned each inferior turbinate body at the one sitting. Twenty-four hours later, on her return for treatment, both nares were stenosed, and the lining of the passages was covered with false membrane. It was of a clear, bluish, translucent color. All that I could do for her relief was to apply a solution of cocain, followed by vaselin. The membrane gradually became thicker, retaining its color. In two days it commenced to loosen and I removed it in large flakes with the forceps. They left a clear surface without hemorrhage. The subsequent treatment was simply a spray of abolene several times a day to the nose. Recovery was rapid, and the relief to the hay-fever complete.

Two years later, in September, 1897, she returned for treatment, again suffering from hay-fever. She said she had none the previous year. On examination the inferior turbinates were all right; but the middle ones were swollen and pressing against the septum. I again used the cautery. After applying cocain on absorbent cotton, I passed the electrode between the septum and middle turbinate on one side,

and pressing outward, singed the surface. A small tampon dipped in albolene was then put in to keep the parts asunder, the operation being repeated on the opposite side. When she returned for treatment the following morning, the condition formerly produced by cauterization had been repeated, the whole lining membrane of each nasal fossa being seemingly coated with a fibrinous layer. The subsequent treatment was the same as on the former occasion, with a like result.

Although I have used the galvanocautery for many years, very fequently, this is the only case in which I have known it to produce false membrane in the nose, outside of the spot to which it had been applied.

Since treating this case of traumatic membranous rhinitis, I have had under my care two cases of idiopathic membranous rhinitis. They both occurred in the spring of 1898; and the following is a brief history:

Miss M. L., aged 17, a clergyman's daughter, had had stenosis of left nostril for two weeks, accompanied by watery discharge and sometimes a little bleeding; right nostril was quite free. There had been neither fever nor systemic symptoms of any kind. About one centimeter within the ala the passage was filled with what appeared to be false membrane of a whitish yellow color. Some seromucous discharge, but no soreness nor excoriation of lip; no history of diphtheria in family before or after. After applying cocain I removed several pieces of membrane that appeared to be loose. They were taken from the septum and inferior turbinate; slight hemorrhage followed. The surfaces were then brushed with a 5 per cent. solution of nitrate of silver, and sprayed with a quarter of 1 per cent. solution of thymol in albolene, the latter to be repeated by the patient several times a day. Internally I gave iron and glycerin.

The patient returned for treatment at intervals of two or three days for several weeks. On each occasion fragments of membrane were removed by forceps, and when bleeding occurred the points were touched with the nitrate of silver solution, the thymol-albolene spray being continued as before. By the end of the second week the membrane ceased to form. Some inferior turbinal enlargement was then touched with the galvanocautery, and at the expiration of another week the patient was well. There has been no recurrence. Microscopic examination of a culture of the membrane, kindly made by Dr. J. R. Wilson, revealed nothing but staphylococcus pyogenes aureus.

The second case, a girl, aged 5 years, was referred by a member of the staff of External Department, Western Hospital, as the right nostril had been completely blocked for some time. She was one of a large family. There was no family history of diphtheria before or after. The child's throat revealed nothing. There was no fever, no odor, no excoriation. The left nostril was free. The right nostril was filled with what I took for the moment to be a white foreign body of some kind, which I supposed had been inserted. After applying a solution of cocain the child submitted to manipulation, and the substance proved to be false membrane that could be removed in fragments by the forceps. This, like the former case, showed a tendency to slight hemorrhage on stripping off the membrane. Similar treatment, too, was likewise followed, with the exception that the home application was simply vaselin frequently applied. In three weeks the patient was quite well. Isolation was not enforced. Microscopic examination in this case was not made; there were, however, no developments either before or after, which would in any way lead to the belief that the case was diphtheritic.

In closing this paper I may perhaps venture to draw the following conclusions:

1. That non-diphtheritic pseudomembranous rhinitis does sometimes occur; and though a very rare disease, it is probably as frequent as *primary* nasal diphtheria.
2. That on clinical grounds alone it is possible, in a majority of cases, to distinguish it from genuine diphtheritic disease.
3. That owing to a possible mistake in diagnosis, isolation in all cases should be imperative, until a reliable bacteriologic examination can be made.

MULTIPLE PRIMARY CARCINOMA.

REPORT OF TWO CASES.

BY ALDRED SCOTT WARTHIN, PH.D., M.D.
INSTRUCTOR IN PATHOLOGY IN THE UNIVERSITY OF MICHIGAN.
ANN ARBOR, MICH.

The relative rarity of multiple primary carcinoma has led to the production of a number of very important articles concerning their occurrence and origin. Winiwarter, Kaufmann, Michelsohn, Schimmelbusch, Bard and Bucher have especially busied themselves with this subject, and, from an exhaustive search of the literature and analysis of personal observations, have given us very important facts not only concerning the origin of multiple carcinomata but of carcinoma in general. To the number of cases of multiple primary carcinoma already reported and studied I shall add in this paper the reports of two cases, in each of which there were two undoubted primary cancers. These cases are important because they add new combinations to those already described, and also because they may serve to give some additional support to some of the theories of the origin of carcinoma.

Only those cases can be regarded as true multiple primary carcinomata in which every possibility of conveyance from a primary to a secondary focus is excluded. Metastasis, both lymphogenous and hematogenous, extension by continuity and contact, implantation and transplantation must be ruled out, and this exclusion can be positively affirmed if the tumors meet the three conditions required by Billroth: 1. Each carcinoma must have a different histologic structure. 2. The histogenesis of each carcinoma from a different parent epithelium must be proved. 3. Each carcinoma must form its own metastases.

But multiple tumors may be primary when they do not answer all of these conditions. The structure of carcinomata arising from a similar matrix in different portions of the body may be the same, and the formation of metastases so frequently fails entirely that their absence can not be looked upon as affecting the diagnosis. The most important criterion is the proof of the origin of each tumor from the epithelium of the tissue in which it is found. Moreover, a large number of principles gained by experience may aid us greatly in the differential diagnosis of primary tumor and metastasis: the presence in the part of chronic changes which seem to favor the development of carcinoma, the type of the tumor, its predilections so far as primary seat and location of metastases are

concerned, etc. All of these may aid in the diagnosis, but the histogenesis of the tumor is the deciding point, so that if two carcinomata are shown to have an individual origin they must be looked upon as autochthonous. Unfortunately, the histogenetic proof is most frequently very difficult or impossible, so that the greater number of the cases reported in the literature as multiple primary tumors are of doubtful significance.

The two cases, the description of which follows below, fulfil the first two conditions of Billroth, the carcinomata in each case possessing a different anatomic structure and clearly showing their different histogenesis. In one case neither tumor produced metastases, in the other, one tumor gave rise to wide-spread secondaries, the other formed no metastases.

Case 1.—Mrs. E. C., aged 45, was admitted to Dr. Martin's clinic in the University Hospital, March 9, 1897. The patient's family history was negative, and she had been in fair health up to four months before admission. At that time she first noticed a fulness in the right ovarian region. Later she had occasional darting pains in the abdomen and began to lose flesh rapidly. On examination, the abdominal wall was yielding but sensitive. There was dulness and fulness in the right side. The cervix contained many small cysts and there was an old laceration of the perineum. In the rectovaginal wall and in the broad ligament there were many areas of thickening.

An exploratory operation was performed by Dr. Martin, and a tumor of the size of a goose egg was removed from the left ovary. There was a large amount of fluid in the peritoneal cavity, and the peritoneum was everywhere studded with small nodules of new growth. The omentum contained large masses of new growth. Small portions of the peritoneal and omental growths were removed for examination. The patient died four days after the operation, and the autopsy was performed by me ten hours after death.

Autopsy Protocol.—The body was of medium height and build; musculature small and flabby; panniculus wasted; hair gray; face senile; slight edema in lower extremities; skin sallow and rough, with moderate hypostasis in the dependent portions; a slight tinge of icterus; rigor mortis present in all of the muscles; body heat absent; head not opened; spinal cord not examined.

The main incision was made to the right of the incision in the median line below the umbilicus, which was made a few days previously in operating for the removal of an ovarian tumor. The edges of the wound were free from redness and discharge; easily separated. The healing process had advanced but slightly. The muscles were brownish, dry, lusterless and tore very easily. There was a very small amount of abdominal fat.

There was about 1500 c.c. of turbid, dark-brown fluid in the peritoneal cavity; it contained numerous blood clots; pelvis filled with a large clot of blood; intestines in normal position, and everywhere adherent, the coils being covered with fresh hemorrhagic fibrinous exudate; throughout the peritoneum were reddish yellow nodules of new growth; the omentum was rolled up and contained large solid tumor masses; diaphragm at level of fifth rib on the right, at the sixth intercostal space on the left.

Mamma: There was but a trace of the gland substance present; no new growth.

Examination of mouth, larynx, trachea and thyroid was negative.

Heart: The apex was in the nipple line in the fourth intercostal space. The pericardium contained about 100 c.c. of slightly turbid fluid; surface of pericardial layers slightly cloudy; ventricles filled with jelly clots, and white clots in the aorta and pulmonary vessels; heart walls very thin and the cavities small; muscle cloudy, yellowish and tore easily; slight thickening of mitral flap, the other valves normal; in arch of aorta, a slight degree of arteriosclerosis.

Lungs: The pleural cavity contained about two liters of clear yellowish exudate; small flakes of fibrin scattered over the surface of the pleuræ, which was cloudy, swollen and lusterless. Throughout the pleuræ, but especially in the parietal pleura, there were many flattened nodular elevations, some white and firm, others red and velvety. On section they showed definite stroma and on scraping yielded an abundant exudate. The lungs were partially atelectatic, on section grayish red, with marked hypostasis in the lower lobes. From the cut surface an abundant foamy fluid exuded, slightly turbid. In the lower lobes there were a few small areas not containing air. There was no evidence to the naked eye of new growths.

Bronchial glands: These were enlarged and soft. There was no caseation and no evidence of new growth.

Abdomen: The omentum was filled with large flattened masses about two inches thick, on section white in color, having a firm white stroma and yielding a scraping rich in cells. The peritoneum was everywhere covered with tumor masses, chiefly small nodules varying in size, shape and color. To many of the nodules strings of fibrin were attached. These growths presented the same appearance on section as those in the pleura and omentum.

Spleen: The spleen was small, blue-brown in color, the capsule thickened and wrinkled. On section the stroma was seen to be increased, the pulp atrophic, no follicles visible, and there was no evidence of new growth.

Adrenals: The adrenals showed the usual postmortem changes, but no evidence of new growth.

Kidneys: The kidneys were small but of normal shape, the fibrous capsule adherent. The cortex contained a number of small cysts and a few small white nodules. The cortex was narrow, its connective tissue increased, the parenchyma cloudy and yellowish, the pelves dilated and their mucosa thickened.

Intestines: The serosa was greatly reddened, cloudy and swollen, and everywhere covered with a bloody fibrinous exudate. Throughout the entire serosa there were tumor nodules varying in size and color. On section they presented an appearance similar to that of the growths found elsewhere. Otherwise, the examination of the intestines, appendix and stomach was negative.

Pancreas: The organ was small and showed a marked fatty infiltration.

Mesenteric glands: They contained nodules of new growth similar in structure to those found elsewhere. Similar masses were also found in the retroperitoneal glands. The examination of the abdominal vessels was negative.

Liver: The liver was small, weighing about two pounds, the left lobe very thin and narrow, the external capsule thickened and presenting many opacities. On section the cut surface was dark-brown, firm, and the lobules small, the connective tissue increased throughout. The gall-bladder was retracted into the liver substance, so that it did not project below the edge of the organ, and almost entirely surrounded by liver substance. On section five large faceted stones of dark-brown color were found filling up the entire cavity of the bladder. No bile was present in the bladder, but an abundance of brownish sand. At the apex of the bladder there was a new growth the size of an English walnut, arising from a firm white base in the mucosa of the apex of the bladder. The greater portion of the tumor was colloid; on the inner surface, long strings of colloid substance passed into the cavity of the bladder between the stones; great increase of connective tissue in the liver about the gall-bladder, but no evidence of new growth in the liver substance. The gall-ducts and common duct were open and no evidence of new growth along these. The tumor seemed localized to the apex of the bladder. Extending from the portal fissure along the portal vein there were strands of new growth similar to that found in the peritoneum, but differing from that in the gall-bladder, chiefly in the absence of colloid. To the naked eye the cut surfaces of the gall-bladder tumor and those found elsewhere did not resemble each other. All of the other growths were more homogeneous, firmer, grayer in color, with closer stroma and showed no colloid change.

Ovaries: The left ovary was removed at the time of operation, a ligature being around the stump of the left Fallopian tube; in the right ovary there was a tumor nodule the size of a walnut, on section resembling the tumors found in the omentum and peritoneum. The broad ligament was studded with small nodules of a similar growth.

Uterus: The uterus was small and its walls firm, the endometrium uneven and hemorrhagic. The tubes were tortuous and their mucosa thickened. Examination of the external genitals, bladder, and rectum was negative.

Examination of the remaining lymph-glands of the body was negative.

Microscopic Examination.—The tumor of the ovary and the small portions of growth removed from the peritoneum at the operation were examined and diagnosed before the patient's death. The main tumor presented the picture of an adenocystocarcinoma arising in a teratoma of the ovary. Cartilage, bone, muscle, skin structures, and tissue resembling thyroid were found in different parts of the growth. The chief part of the mass was made up of glandular cysts lined with short columnar epithelium. The origin of the carcinoma from the

epithelium of these cysts is clearly evident. In many of the cysts there is a proliferation of these columnar cells into the lumen of the cyst, filling it entirely with nests of cells; in other cysts the epithelium extends into the lumen on short papillæ giving the appearance of a papilliferous cyst, but in many of the cysts the epithelium extended below the basement membrane into the connective tissue, forming large areas of cells growing free in the lymph-spaces.

Large areas of the ovarian tumor, therefore, present the appearance of a medullary carcinoma which in many places preserves some resemblance to gland structure. The metastases from the peritoneum present the same appearance of an adenocarcinoma which is in part medullary. Some of the secondary growths also contain cysts.

The tumor from right ovary, the growths in the pleuræ, peritoneum, omentum, and lymph-glands removed at the autopsy had the same structure as that of the tumor of the left ovary. No secondaries were found in lungs, liver, spleen, or kidneys.

The sections of the tumor in the apex of the gall-bladder present an entirely different appearance from the growths found elsewhere. The base of the tumor arises directly from the mucosa of the gall-bladder; the firm white portion at the base presenting the appearance of a carcinoma simplex. The growth of the tumor was entirely into the lumen of the bladder, the thickened wall of the bladder showing no infiltration. The chief portion of the mass of the tumor extending into the cavity of the bladder shows an extensive mucous degeneration of the cell nests. In the extreme portion of the tumor removed from the base both the stroma and cell nests have undergone a mucous degeneration. That the gall-bladder tumor and the ovarian tumor are primary tumors is clearly shown by the following facts:

1. The ovarian growth takes its origin from epithelial cells lining the cystic glands of an ovarian teratoma; the origin of the growth in the gall-bladder is from the epithelium of the mucosa of that organ.

2. The cells of the carcinoma of the ovary are large with large vesicular nuclei; those of the carcinoma of the gall-bladder are smaller and have very small, deeply-staining nuclei.

3. The ovarian carcinoma preserves some resemblance to gland structure, and is characterized by a tendency to form large cell masses; the gall-bladder carcinoma forms small nests of cells and shows no resemblance to gland structure.

4. The gall-badder carcinoma is further characterized by a marked tendency to mucous degeneration; the ovarian carcinoma shows no such change.

5. The secondary growths found in pleuræ, peritoneum, etc., have a structure identic with that of the ovarian tumor, and must be considered as metastases of that tumor. No metastases of the gall-bladder tumor could be found.

The microscopic examinations of the other material obtained at the autopsy showed as follows: Lungs, congestion, edema, scattered areas of bronchopneumonia; spleen, senile atrophy; kidneys, early stage of chronic interstitial nephritis with arteriosclerosis, chronic pyelitis; liver, brown atrophy with localized hepatitis in the part near the gall-bladder; pancreas, fatty atrophy.

Diagnosis.—Acute hemorrhagic peritonitis (post-operative); primary adenocarcinoma arising in ovarian teratoma with metastases in pleuræ, peritoneum, omentum, mesenteric and retroperitoneal lymph-glands; primary colloid carcinoma of the gall-bladder; cholelithiasis; atrophy of liver and spleen; early stage of arteriosclerotic kidney; pyelitis; bronchopneumonia and edema of lungs; acute pleuritis; fatty atrophy of pancreas; laparotomy.

Case 2.—Mrs. M. J. S., aged 59, was admitted to Dr. Nancrede's clinic of the University Hospital on Oct. 19, 1898. The previous history was negative. The present trouble began three weeks before admission, when she began to have severe constipation, with pain in the left side of abdomen. On October 17, after taking a number of laxative pills, she had severe and frequent attacks of vomiting for two days, without stools. The vomitus was greenish with a foul odor, but not fecal. Examination showed moderate tympanites with tenderness in the left iliac region, where a soft mass could be felt and easily indented with the fingers. A diagnosis of fecal impaction was made and enemata were given which were followed by the passage of a large quantity of gas and several large stools. Her condition seemed improved but no movements of the bowels could be obtained during the next week. On the 28th she had a severe attack of pain in the abdomen with a sensation of "something breaking." She showed signs of collapse almost immediately and was at once operated on. The abdomen was found to be full of feces. The condition of the patient was such that the operation was discontinued, death occurring a few minutes later.

Autopsy protocol.—Mrs. S. died at 10:40 Oct. 28, 1898. The autopsy was conducted by me at 2 o'clock the same day. The body was well built, about five feet six inches long, the skin pale gray, and over the left infraclavicular region a bluish discoloration surrounding five dark-red puncture marks (punctures for saline infusion). There was marked hypostasis over the back. The panniculus was very thick. There was no edema. Body heat was present and universal rigor mortis, abdomen greatly distended and a fresh laparotomy wound between the pubis and umbilicus.

The head and spinal cord were not examined.

Abdomen: On removal of bandage a recent laparatomy wound was seen between the umbilicus and pubis, and from between the stitches there exuded a foul-smelling brownish fluid; edges of wound clean and no evidence of inflammatory reaction; no pus present. The abdomen was opened through the wound, the edges of which were not adherent. A large amount of foul smelling gas escaped on entering the peritoneal cavity; the greatly distended intestines rising up out of the wound; abdomen contained about two liters of thick, foul-smelling brownish fluid filled with gas bubbles, also portions of fecal matter; intestines covered with a thick brownish frothy slime; no blood observed in the fluid or on the intestines. The omentum was rolled into a thick fold and high up in the dome of the diaphragm. About the middle of the sigmoid flexure there was an apparent constriction of the intestine with a great increase of the subperitoneal fat so that the appearance of an encircling lipoma of the intestine was produced. The mass was very firm, intestine collapsed and empty below this point, but above it, enormously distended, its walls being very much thinned; 87 cm. above the point of constriction there was a perforation in the tenia of the ascending colon 1½ inches long by ½ inch wide. The edges of the perforation were extremely thin but showed no other pathologic changes. The edges were turned out. The wall of the intestine in the vicinity showed thin areas, but no other point of perforation could be found. The serosa of the entire intestine was injected, cloudy, and contained small hemorrhagic areas, also areas covered with a thin layer of fibrin. The fat of the mesentery and the epiploic appendages was greatly increased, its blood-vessels greatly congested. Near the appendix there was a small round nodule about the size of a pea, dark red in color. It was removed for microscopic examination. The appendix was normal. On opening the sigmoid flexure the lumen of the intestine at the point of constriction was found to be completely obstructed. In the lumen and completely filling it was a small oblong, soft, reddish body about the size of a large raisin, and unattached. When removed, the lumen at the point of constriction would admit a lead pencil. The mucosa about the constriction was thrown into folds, very much puckered, and covered with small polypoid projections dark-red in color. Between these polypoid prominences were grayish points of ulceration. On cuting through the intestinal wall at the point of constriction the lumen of the bowel was found completely encircled by a new growth, the tissue of which was directly continuous with that of the prominences in the mucosa. The cut surface of the growth was for the greater part firm and white, containing a number of small colloid areas. In the entire remaining portion of the intestine nothing pathologic was found.

Liver: The liver was small, the left lobe being greatly atrophied, the capsule thickened. There was a broad flattened groove on the anterior surface of the right lobe just above and parallel to the lower border. On section the cut surface was dark brownish-red, rich in blood-vessels, its lobules clearly defined, somewhat smaller than normal, the connective tissue increased.

Gall-bladder: The gall-bladder was distended and contained thirty-three triangular grayish stones and a small quantity of dark brown slimy fluid containing much grayish sand. The mucosa was much thickened and polypoid. On the anterior wall there was a polypoid growth about an inch long by half an inch wide, attached to the mucosa by a wide pedicle, and the wall of the bladder thickened and indurated at the point of attachment. In the dilated common duct two other stones were found, very irregular in shape, soft and producing partial obstruction of the lumen of the duct.

Spleen: Much smaller than normal, its capsule was greatly thickened and white and opaque. On section it bled freely. The pulp was dark brownish-red and of firm consistency, the stroma increased; the follicles could not be seen.

Adrenals: Both adrenals were well preserved and showed no pathologic changes.

Kidneys: The left kidney was somewhat smaller than normal, the fatty capsule about an inch and a half thick, the fibrous capsule thickened and adherent. The surface of the cortex was granular, grayish-red. On section the cut surface was moderately rich in blood, grayish-red in color. The cortex was only about one fourth as broad as normal. The glomeruli were clearly seen as fine red points. The mucosa of the pelvis was thickened. The right kidney was similar in all respects to the left.

Stomach: The stomach was distended; contained about 500 c.c. of brown fluid containing food remains; mucosa slightly thickened.

Pancreas: This organ was large, of normal firmness and contained a large amount of fat.

Bladder: Empty, the mucosa slightly thickened. Examination of the ureters was negative, of the vagina also; cervix everted; small polyp protruded from the cervical canal; uterus enlarged and its walls thickened. On the endometrium in the fundus there was a polypoid growth about the size of a bean, dark-red in color.

Ovaries: Both ovaries very small, hard and white, in the right one a small cyst the size of a pea. The tubes showed no pathologic changes.

The abdominal aorta contained scattered patches of thickening.

Thorax: We were not allowed to open the thorax, and the only examination of the thoracic organs that we could make was a very incomplete one made through the diaphragm. Nothing abnormal was noted in this.

Microscopic Examination.—Sections of the intestinal wall at the point of constriction in the sigmoid flexure show that the lumen of the intestine is completely surrounded by a new growth, the type of an adenocarcinoma. The nests of cells, most of which preserve a gland-like lumen, extend throughout the muscularis and into the abundant fat tissue beneath the serosa. The cells of the new growth are large, some distinctly columnar, and contain large, deeply-staining vacuolated nuclei. In many of the cell-nests the cells have undergone a mucous degeneration. On the surface of the growth lining the lumen of the intestine there are flat ulcers. At the periphery of the growth the transition from the normal cells of the mucosa to the carcinoma cells can be clearly made out. The sections of the free body found in the lumen and causing the acute obstruction show it to present the appearance of an adenomatous polyp. It consists almost entirely of gland-like spaces lined by a single layer of columnar cells. There is very little interstitial connective tissue, the tubules lying close together. In many places the connective tissue is closely infiltrated with leucocytes and many of the tubules are filled with pus. The blood-vessels are greatly distended and there is much hemorrhage into the connective tissue and into the tubules.

Sections of the wall of the gall-bladder show a chronic inflammation of the mucosa, with polypoid hyperplasia of the epithelium. The tumor on the anterior wall consists of papillæ having a small amount of connective-tissue framework covered with a single layer of short columnar cells. In the pedicle of the growth there are gland-like spaces lined by the same kind of cells. These gland-like tubules extend beneath the mucosa into the thickened wall of the gall-bladder beneath the muscularis, forming a small nodule in the wall immediately beneath the point of attachment of the pedicle of the polyp. The cells lining the spaces in the muscularis are different in character from those on the surface of the polyp. These are less distinctly columnar and have smaller and more deeply-staining nuclei. They do not resemble the cells in the intestinal growth, being very much smaller and possessing very small, round and deeply-staining nuclei. Moreover, the origin of these cells can be clearly traced from those in the polyp, with which they are in places directly continuous. The gall-bladder tumor and the intestinal growth are undoubtedly primary growths independent of each other. They do not resemble each other and the origin in each case is clear. No metastases of either tumor were found.

The small polypi removed from the uterus show the structure of simple adenomata without infiltration of the uterine wall. There is a marked glandular endometritis present. The sections of the liver and spleen show simple atrophy and chronic congestion. The kidneys present an early stage of chronic interstitial nephritis.

Diagnosis.—Acute perforation of colon following acute obstruction of sigmoid flexure by constriction caused by an adenocarcinoma of the intestinal wall and blocking of the narrowed lumen by a free portion of the growth; primary adenocarcinoma of gall-bladder; cholelithiasis; chronic cholecystitis; atrophy and chronic congestion of liver and spleen; chronic interstitial nephritis; chronic endometritis; adenoma simplex of endometrium; arteriosclerosis; laparotomy.

Epicrisis.—It has been seen from the microscopic description given above that the two growths in each of these cases fulfil the first two conditions of Billroth; in each there is a decided difference in the anatomic structure, and the different histogenesis of each is very clearly evident. The study of these tumors leaves no doubt in my mind of the primary nature of the two carcinomata found in each case. Such a combination of coincident primary tumors in the same body I have been unable to find in the literature. They are not mentioned in Bucher's exhaustive report.

It is an interesting fact that one of the tumors in each case was found in the gall-bladder in association with gall-stones. The frequent coincidence of biliary calculi and primary cancer of the gall-bladder has long been known, and recent observations would tend to show that they are present in about nine-tenths of all the cases of primary gall-bladder cancer. The greater number of cases of gall-bladder cancer occur in women; in Musser's collection of one hundred cases the proportion was as high as three to one. The greater frequency of biliary calculi in women is also well known, more than three-fourths of all cases occurring in the female sex. Various causes have been assigned, but undoubtedly one of the chief factors in the production of biliary calculi is the abnormal pressure exerted upon the lower part of the liver in tight lacing. In twenty-five post-mortems of women made by me during the last year only two did not have gall-stones and those two did not present the condition of "corset liver" and "corset spleen" which were found in the other twenty-three. Of the same number of men only one had gall-stones, a soldier, aged 30, and his liver presented a marked narrowing and lengthening of the left lobe and a broad groove on the anterior surface of the right lobe corresponding to the edge of the ribs, a "corset-liver" produced by the wearing of a belt. Marchand, Riedel, Rother and Schröder have emphasized the frequent association of "corset-liver" and cholelithiasis. Naunyn affirms that the single known general cause of the formation of gall-stones is the stasis of the bile brought about by habits of dress, pregnancy, etc. He further believes that the calculi are not produced by the thickening of

the bile, but that pathologic changes in the mucosa of the gall-bladder lead to their formation. These changes, he holds, are inflammatory and are produced by the invasion of the bile-passages by germs from the intestine, the colon bacillus being the form most frequently found. The stasis of the bile is the factor which predisposes to the germ-invasion.

In all of my cases of biliary calculi there were pathologic changes in the wall of the gall-bladder. These consisted, for the greater part, in a chronic inflammation associated with a polypoid hyperplasia of the mucosa. In each of the two cases described above this condition was more marked than in any of the other cases, and in this polypoid mucosa an adenomatous polyp was found which in each case had become carcinomatous. In Case 1 it may have been carcinomatous from the beginning, but in Case 2 the greater part of the polyp was adenomatous in structure, the picture presented being that of an adenoma becoming malignant.

It is impossible to consider these facts without being inclined to look upon them as bearing upon the question of etiology of carcinoma. The circumstantial evidence is very strong that the hyperplasia of the gall-bladder mucosa may be the starting-point of a carcinomatous proliferation, that the hyperplasia may pass through the stage of adenoma to that of carcinoma. Case 2 undoubtedly shows this change. If the hyperplastic changes in the mucosa are due to the inflammation set up by the presence of germs or gall-stones, the etiology of primary gall-bladder cancer would then be explained under the head of proliferation following chronic irritation, and would be placed in the same category with many of the forms of epithelium of the skin in which chronic inflammation is believed to play an exciting rôle.

The second tumor in Case 1 represents a fairly common group of neoplasms, a teratoma of the ovary becoming carcinomatous through proliferation of its epithelial cells. A study of the malignant tumors of the ovary and testis would lead us to believe that this is of relatively frequent occurrence, but the cause of this proliferation, we are as yet unable to explain. The theories both of Thiersch and Cohnheim apply equally well. It is interesting to note that in this case the carcinomatous proliferation arises in the adenomatous portion of the teratoma, and that there is a well-marked succession of stages through adenoma simplex, adenoma papilliferum and adenocarcinoma to tumor areas bearing the type of carcinoma medullare.

The second tumor in Case 2 is also an example of an adenoma becoming malignant. The free mass blocking the narrowed lumen was structurally an adenoma simplex, but infiltrating the muscularis and subperitoneal fat is a tumor which is structurally an adenocarcinoma. Moreover, the neighboring glands of the intestinal mucosa are hyperplastic and the direct transition of their cells into tumor cells can be seen.

Three of the primary tumors found in these two cases can, therefore, be traced directly to a carcinomatous proliferation of the epithelial cells of adenomata, and the fourth one from its polypoid growth, its extension into the lumen and its origin from a mucosa so hyperplastic that it is adenomatous in type may most reasonably be thought to have a similar origin. This coincidence of origin is striking, but becomes still more so when we connect with it the fact that in the second case there was a marked glandular endometritis with the formation of adenomatous polypi, one in the fundus, the other in the cervical canal. No evidence of malignancy was found in these uterine tumors. Case 2, therefore, presents an adenoma of the intestine, one of the gall-bladder, and two of the endometrium; also a wide-spread adenomatous hyperplasia of the mucosa of the gall-bladder and uterus. This tendency to the development of adenoma is certainly very noteworthy, and the question at once arises as to its etiologic factors and the relation of these with those of carcinoma.

It would be desirable if the cases of multiple carcinoma could throw some light upon the general etiology of carcinoma. A survey of the relatively small number of cases reported in the literature brings out some striking facts in regard to the distribution of the multiple tumors. They fall into definite groups which in the order of the frequency of their occurrence are as follows: 1. Epithelioma following xeroderma pigmentosum (Kaposi). 2. Epithelioma following senile seborrhea (Schuchardt). 3. Chimney-sweep's cancer (English authors). 4. Tar cancer (English authors). 5. Paraffin cancer (Volkmann). 6. Lupus carcinoma (Richter, et al.). 7. Multiple mouth cancers following psoriasis linguæ, etc., (Schwimmer, Hutchinson, et al.). 8. Multiple carcinomata, one primary located in the skin, the other in the stomach, intestine, uterus or mamma. 9. Cases in which the primary tumors are found in the stomach, intestine, uterus or mamma, occurring sometimes simultaneously in the same organ or as a regionary recidivation, or coincident in any two of these organs. 10. Arsenic cancer (Hutchinson).

It will be seen from this list that multiple carcinomata are most frequently found in xeroderma pigmentosum and senile seborrhea, rarest in arsenic keratosis. Next to the arsenic cancer in rarity come the cases of multiple carcinoma of the internal organs. The chief rôle which the skin plays in multiple cancer is in harmony with the greater frequency of primary carcinoma of the skin, and in analogy to this the internal organs in which multiple carcinomata are most frequently found are those in which malignant tumors most often occur. This multiplicity occurs most frequently in the same organ; much more rarely is there a coincidence of primary tumors in different organs.

The relative rarity of multiple carcinomata of the stomach and intestine is, however, very striking when compared to those of the skin, in spite of the great frequency with which single primary tumors are found in these two places. Schimmelbusch and Bucher attempt to explain this as follows:

1. The stomach and intestine as a rule are not examined carefully enough at autopsy and many multiple primary tumors undoubtedly escape us.

2. The favorite seats of carcinoma in the stomach and intestine are so limited in extent that the chances for the production of multiple tumors are not great. An early confluence may take place, and it is possible that many so-called metastases of a primary tumor in the same organ are in reality multiple primary tumors.

3. The duration of life in carcinoma of the internal organs is so short compared to that in skin cancer that the longer duration in the latter case must favor the development of multiple tumors.

The absolute number of cases of multiple primary tumors in the gastro-intestinal tract is, nevertheless, large enough to make us believe that they will be

found to be of more frequent occurrence than is now evident. Next to the stomach and intestine the mamma plays the most important part in multiple carcinoma. Double-sided carcinoma of the ovaries has been described, but it is most probable that in these cases one of the organs was secondarily affected. No positive evidence exists of the coincidence in both ovaries of primary carcinomata bearing different anatomic structures.

The association of multiple cancers of stomach and intestine with polypi is very striking. According to Klebs, multiple carcinomata of the stomach may develop from multiple polypi of the stomach. In many cases, according to Bucher, polypi are found near carcinomata. Handford describes a case of rectal cancer in which there were multiple polypi of the large intestine. One of the polypi showed at its base an infiltration of the intestinal wall and an atypic growth of epithelium, so that he looked upon it as a second primary carcinoma. Hauser found polypoid growths in five out of twenty-four intestinal cancers, and in four of the cases he was able to demonstrate the origin of the carcinoma from the polyp.

According to Schimmelbusch the cases of multiple carcinoma reported do not throw any light upon the etiology of carcinoma in general. He holds that the parasitic theory receives no support, and that the theories of Thiersch and Cohnheim may be equally well applied. Winiwarter and Michelsohm hold to the view of origin through the effect of the same irritant. Bucher rejects the parasitic theory, and also that of Cohnheim in so far as applied to carcinoma, and supports the theory of Thiersch of a regional predisposition; that the harmful agent, as tar, soot, etc., does not produce the carcinoma, but behind the effects of these irritants there lies some cell anomaly as yet unknown to us, which furnishes the conditions for the development of the new growth. Multiple carcinomata are, therefore, the result of local predisposition and are to be looked upon as analogous to Thiersch's regional recidivation.

Bucher, however, applies this theory only to the occurrence of multiple tumors in the same organ. If the theory of local predisposition best explains this condition, its application to the origin of multiple primary carcinomata in different regions of the body will bring us toward the old theory of cancer diathesis or, to what amounts to the same thing, a theory of multiple regions of predisposition. In our present state of knowledge we can go no farther. As to what the nature of this local cell anomaly may be we can not say more than that it seems to consist in a removal of the natural inhibition of cell growth, thus giving rise to an abnormal cell proliferation.

The two cases described by me do not give any special support to the parasitic theory; Cohnheim's theory can not be applied; the theory of unequal atrophy will not suffice, and Ribbert's theory of a primary granulation tissue process is not supported by the facts. We are thus thrown back upon the theory of multiple local predisposition, for want of anything better, and the second case especially seems to support this very strongly. The polypoid growths in the intestine, uterus and gall-bladder, with the extensive glandular hyperplasia of the mucosa of the last two organs, point clearly to some widespread anomaly of the epithelium of the mucous membranes. In the gall-bladder the tendency to hyperplasia may have been excited by the irritation of gall-stones; in the uterus the chronic inflammation present may have been the starting-point of the polypi found there. The carcinoma in the sigmoid flexure is located at one of the most favorite seats of intestinal cancer, but we can not explain this location. There is certainly a strong analogy between this case and those of multiple carcinomata of the skin in which the new growths never arise from normal skin, but develop, sometimes very quickly, out of slowly progressive chronic changes.

The theory of multiple seats of predisposition has also an apparently strong support in the following case which I shall mention very briefly:

Case 3.—Mr. R. V. C., aged 54, was admitted to the clinic of nervous diseases in the University Hospital on Oct. 5, 1898. His mother had "cancer" of the face, but otherwise his family history was negative. He had had numerous attacks of gonorrhea, and there was also a strong suspicion of syphilis. A clinical diagnosis of primary lateral sclerosis was made. The patient died on November 21, and the autopsy was conducted by me on the same day. The following brief extracts are taken from the extensive autopsy protocol:

Stomach: The mucosa of the stomach was thickened, especially in the region of the pylorus. Attached by a narrow pedicle just inside the pyloric ring there was a narrow pear-shaped polyp about two inches long by half an inch in diameter extending through the pylorus into the duodenum. The surface of the polyp resembled that of the stomach mucosa; on section the polyp was pale pink in color, of firm consistency and showing a slightly reticulated structure.

Intestine: In the mucosa of the anterior wall of the rectum there was a small polypoid growth about an inch in diameter. It is grayish-red in color and of fairly firm consistency.

Bladder: In the fundus of the bladder there was a small round polyp about half an inch in diameter, attached by a narrow pedicle. The bladder mucosa was greatly thickened.

The microscopic examination of these growths showed those of the stomach and intestine to be adenomata, that of the bladder to be a papilloma. The sections of the mucosa of stomach, intestine and bladder showed a fibroid hyperplasia; in the stomach a chronic interstitial gastritis with atrophy of the glands. Sclerotic changes with atrophy were found in all of the organs.

This case, therefore, presents in three different regions a chronic inflammation associated with the formation of a benign tumor representing a local overgrowth of the mucosa. No evidences of malignancy were found in these tumors, but if the patient had lived long enough the possibility of the intestinal polyp becoming malignant would be about twenty chances in a hundred; that of the stomach polyp about three in a hundred. This calculation, which is, perhaps, somewhat fanciful, is based on the statistics of Hauser and the reports of a large number of cases of cancer of these regions. The evidence regarding the origin of bladder carcinomata from benign papillomata is much less satisfactory, but the possibility of such an origin can not be denied.

In conclusion, the known cases of multiple carcinomata emphasize the relations between carcinoma and chronic inflammation of epithelial surfaces, do not give any additional support to the parasitic theory, and are not explained by the theories of Cohnheim or Ribbert, but lead to a wider application of Thiersch's theory of local predisposition. It does not necessarily follow that multiple primary carcinomata arising in the same individual should have no connection with each other; if the cause of the new growth could be shown to be a living parasite. Unfortunately, we are not yet in a position to give positive proof of this, and the study of the cases of multiple carcinomata does not give us any furtherance in this direction. Our present state of knowledge concerning the etiology of

multiple primary carcinomata might then be expressed as a theory of multiple seats of a cell anomaly consisting in the removal of the normal inhibition of the cell leading to atypic overgrowth, and that in the production of this cell anomaly parasitic, physical, or chemic irritants may play the rôle of a primary exciting factor. The final missing link in our knowledge, be it a parasite or an inherent quality of the cell, itself, is yet to be discovered.

BIBLIOGRAPHY.

Audourard: Thesis, Paris, 1878.
Bard: Arch. gen. de Med., 1892.
Billroth: Allgem. Chir., Path. u. Ther., 1889, p. 908.
Bucher: Ziegler's Beiträge, Bd. xiv., S. 71.
Cordes: Virchow's Archiv., Bd. 145. S. 422.
Handford: Trans. Path. Soc., London, 1890, vol. xli.
Hauser; Das Cylinderepithelcarcinom des Magens u. Dickdarms, Jena, 1890.
Hutchinson: Trans. of Path. Soc., London, vol. xxxix.
Kaposi: Med. Jahrbücher, 1882.
Kaufmann: Virchow's Archiv., Bd. lxxv.
Klebs: Allgem. Path., Bd. ii, S. 776.
Michelsohn: Inaug. Diss., Berlin, 1889.
Richter: Viertelj. f. Derm. u. Syph., 1888.
Schimmelbusch: Langenbeck's Archiv., Bd. xxxiv.
Schuchardt; Langenbeck's Archiv,, Bd. xxi.
Schwimmer: Viertelj. f. Derm. u. Syph., 1897.
Thiersch: Der Epithelkrebs, Leipzig, 1865.
Volkmann: (Quoted by Bucher.)
Winiwarter: Beiträge zur Statistik der Carcinome, 1878

VESICAL CALCULUS IN THE FEMALE.

WITH A REPORT OF FOUR CASES.

BY T. J. HAPPEL, M.D.

TRENTON, TENN.

In 1872, while attending medical lectures in New York, I witnessed an operation by Dr. Emmett for the relief of cystitis, which consisted in the formation and temporary maintenance of a vesicovaginal fistula. The proceeding at that time seemed to me a very radical one, but he stated that every other means of relieving the distressing trouble had been tried and had failed; hence the operation. He added that such cases yielded to the operation, if the fistula was not allowed to close too soon. This made a deep impression on my mind, as at that time the gynecologic fad was the closure of vesicovaginal fistulæ. This operation of Dr. Emmett was recalled to my mind when, in examining one of the latest works on surgery for light upon a case of vesical calculus in a female, I found the statement that some unknown surgeon had advised a very unscientific and unsurgical procedure for the treatment of such cases, of opening the bladder through the vagina and extracting the stone, and leaving the fistula thus formed for the *vis medicatrix naturæ* to dispose of. The very fact that the operation was spoken of as unscientific caused me to study it the more, and it was impressed upon my mind as a most common-sense procedure when one has a coexisting cystitis with which to deal, which would demand treatment after the removal of the stone.

The case which I then had in 1870 was brought to my office by a physician, with a request that I examine her with him. He reported a long-continued dysuria with cystitis; mucus, pus and muco-pus being discharged from the bladder, accompanied by much tenesmus.

I inquired whether he had explored the bladder with any instrument. He replied that he had not; nor had he under an anesthetic attempted a careful examination of the case, but had brought her to me. She was pale, anemic, with a face marked by pain; aged about 5 years. Chloroform was administered and a female catheter was introduced into the bladder. As soon as it had passed the urethra it impinged upon a calculus, the touching of which was followed, even though fully anesthetized, by a most violent tenesmus, everting the rectum and emptying it of its contents.

The presence of the stone was thus at once determined, and a further examination with the catheter used as a sound enabled us to decide that it was a large one for a child of her years. The question of removal was discussed and a date about one week later fixed upon as the time. Nothing but a suprapubic operation seemed admissible in her case, and she was sent home to be put on tonics and alkaline diuretics. The case was an unfavorable one, but to attempt to crush the stone was decided to be inexpedient. At the appointed time, under chloroform, the suprapubic operation was performed, and a stone measuring four inches in circumference was with much difficulty extracted from a very much thickened and contracted bladder. In enlarging the opening to remove the calculus, a minute opening was made through the bladder into the peritoneal cavity. The child never fully rallied from the shock of the operation and died in seventy-two hours. The stone was not weighed. The usual washing out of the bladder was done after the removal of the stone, and a drainage-tube was passed from the abdominal wound through the urethra and was confined, but before her death was in some way removed and had to be replaced. The incision at death was healing nicely.

The second case was a child not quite 2 years of age. In this case the small calculus could be seen when a violent effort was made in urinating.

The child was brought to my office and placed on the table and the vulva opened so as to expose the meatus, the slightest touch of which was followed by violent straining efforts to urinate. The small calculus was seen at the meatus, which contracted around it. Cocain was applied in solution, a nick was made in the opposing fold, and on the second effort the calculus was removed with a pair of mouse-toothed forceps, and the case was dismissed and has never had any further trace of trouble.

In February, 1897, I was consulted by Mr. W. in regard to his wife, who, from his report, was a facsimile of the woman referred to in the Bible, who had suffered many things at the hands of many physicians. He wanted a prescription for some kidney trouble which had existed for more than two years. Having heard his statement fully, I refused to prescribe, but asked for an examination of the case. I found the patient, a large fleshy woman of about 65 years, tossing and groaning in agony, having just attempted to urinate. She readily consented to an examination, and, placing her across the bed, I passed a female catheter into the urethra, striking the large calculus just at the entrance to the bladder. The pain produced by the examination was intense, and she begged for an immediate operation. I directed, as in the first case, tonics and diuretics for a week, but at the end of that time the weather became too cold and variable for one of her age and surroundings, so that another week elapsed before a favorable opportunity presented itself. In this interval, after examining many authorities, I determined, on account of the inflamed condition of the bladder, to perform the unscientific operation of removing the calculus per vaginam and leaving the fistulous opening through which the bladder was to drain and be washed out.

At the second date, with proper professional help, I made the operation determined upon, and reached

a large calculus. In applying forceps the stone was crushed and fully one-half of it, in bulk, was lost in washing out. The bladder having been thoroughly washed out, the patient was put to bed and made an uneventful recovery, the bladder being washed out a few times only. In eight weeks the fistulous opening had closed.

The fourth case was in many respects similar to the third; but the formation of the calculus had been preceded by a chronic cystitis, supposedly of gonorrheal origin. The patient had treated this cystitis for years, with injections into the bladder and with other medicines. She had occasionally come under my observation, but not as a patient. She finally became a morphin user. In June, 1897, after a fall or hurt, all of her bladder symptoms became much more aggravated, and I suggested an exploration, telling her that there was probably a stone in the bladder. After much persuasion she consented to an examination of the bladder, and the presence of the stone was at once demonstrated. With difficulty, consent for an operation was obtained, and in ten days the same operation was done in this case as in the preceding, and the stone removed. In attempting to grasp it, a small piece was broken off; the bladder was washed out, to remove all fragments and detritus of all kinds. The fistulous opening closed slowly, and after what appeared to be an attack of acute cystitis, a small gravel, about the size of a pea, passed through the incision about one month after the operation. Two months later, a second fragment passed, and the fistula closed at once, and she has had, now about eighteen months since, no further trouble. The morphin habit has been abandoned and the patient is now actively engaged with her housekeeping affairs. Her bladder is contracted to about half its normal size, but she emphasizes the fact that she is well.

These two cases (the third and fourth above) furnish the points which I wish to make in this paper. Both women had passed the climacteric, hence bladder symptoms could not be attributed to "change of life." Neither had any rectal trouble. Both had suffered from cystitis. Both had found abundant white deposits in the chamber after urinating and had noted the accumulations, without thinking it necessary to make any report in regard to it. Both had taken medicine *ad nauseam*, but neither had ever had the bladder explored. Temporary relief in both cases had been obtained from some medicine, perhaps containing some preparation of an opiate; but this relief was of short duration. The first exploration revealed a large calculus in each bladder, which had evidently been the growth of several years. In each case the result of the operation was all that could possibly have been expected—prompt recovery, with almost no after-treatment, the fistulous opening closing too rapidly in the fourth case.

The question arises: Why not have dilated the urethra and washed out after crushing? My answer is, that to have dilated the urethra in these two cases would no doubt have resulted in incontinence of urine, and in the sacculated condition of the lining of the bladder it would have been almost impossible to have fully removed all the detritus, and the result would have been one or more nuclei for the formation of new calculi. This was demonstrated in the last case, where at least two fragments were retained, in spite of a thorough digital search and the flushing of the bladder with a gallon of water from a fountain syringe. In the third case the opening in the bladder was larger and the cystitis had not continued longer than three or four years, hence the mucous coat was not in as bad a condition as the last one, in which the inflammation had existed for twelve or fifteen years. Both stones were large; then why not have done the suprapubic operation, which is preferred by many?

In my opinion, the suprapubic operation, even though the stone be large, is not to be compared with the vaginal route where this canal is fully developed, as in the adult female, especially in cases of married women. In the suprapubic operation you have no natural drainage. The bladder must be flushed either through the abdominal incision or the urethra. In either case the outflow is unsatisfactory and the urine must be retained in a bladder already inflamed, where it acts as a still further irritant or must drain out through the abdominal wound at the risk of urinary infiltration, and of setting up inflammatory action in the site of the wound—while in the vesicovaginal route the urine flows out constantly at first, thus allowing no new irritation of the inflamed lining of the bladder, but on the contrary, permitting a free and ready escape of urine, pus, mucus and any remaining portion of the calculus. Thus the bladder is placed in a most favorable and scientific condition for a rapid recovery from its diseased condition superinduced by the presence of the calculus. In no other way can we obtain as favorable conditions for recovery. In the crushing operation, which can be done with more ease in the female than the male, no arrangement is made for drainage—nor is it possible to prevent at all times a fragment of the calculus from imbedding itself in the bladder walls, where it can not be and is not found till grave symptoms have developed, necessitating a new exploration of the bladder, when again it may not be located. The only drainage in these operations of crushing is obtained, as stated, through the urethra, which must be dilated to some extent, and which, if not overdistended, so as to allow the urine to escape continuously from a paralysis of the sphincter, at once contracts, and holds the urine and all other irritants in the bladder till expelled per urethram, or till drawn off and washed out again. The vesicovaginal route affords all the good that is presented in any of the other routes, with none of the drawbacks, and gives, above all things needed for the relief of a chronic cystitis, rest and freedom from irritants of all kinds.

These cases are not many, but the results in my hands have been such as to warrant me in the same procedure in future cases of the kind. Another lesson is impressed upon us by such cases as these in practice, viz., in all cases of chronic irritation of the bladder to explore it fully and freely with a sound. Some cases of irritable bladder may be due to the presence of some foreign body which the sound may detach and permit to escape. These explorations may detect the presence of a calculus which had never been suspected, in women especially, where such symptoms are so often referred to "change of life" or prolapsus uteri. No harm can result from the careful exploration of the bladder with a clean sound and where it can not be done without an anesthetic, it should be administered, and the bladder filled with borated warm water and then explored. In some cases it will be found that the bladder symptoms result from hemorrhoidal troubles; then the cause should be removed, but the bladder in each and every case ought to be carefully examined.

ADHERENT PLACENTA.*

BY CHARLES B. REED, M.D.
CHICAGO.

In a series of observations published on the third stage of labor where the placenta was delivered spontaneously, the time required for the completion of the delivery was carefully noted, and the results varied from a few minutes to thirty-six hours.

With these statistics before us, it is manifestly impossible to place a definite limitation on the third stage and to assert that all cases which pass the prescribed bounds shall be regarded as pathologic, and interference undertaken. In spite of the tendency of the last few years to interfere less and less in obstetric cases without positive indications, it may be safely said that if the placenta is not spontaneously delivered within two hours after the birth of the child, some pathologic condition is present which necessitates interference.

Usually the presence of hemorrhage or other symptoms will further an earlier diagnosis, and the question generally lies between two closely related conditions, an "adherent placenta" or "retained placenta," and the differential diagnosis can only be obtained by careful examination.

In "retained placenta" the structure is detached and lies within the maternal parts, from which, owing to some obstruction in front or insufficient *vis a tergo*, it can not be expelled without artificial assistance.

The adherent placenta, as its name indicates, is still attached to the uterine surface more or less intimately, either by its entire surface or by certain segments of it, this latter constituting the so-called "partially adherent placenta," which furnishes a very alarming form of postpartum hemorrhage.

The site of adhesion, according to Nyulasy, is most frequently the fundus, but very often it is near or involves the cervix, as in placenta previa, but there is no regularity in the selection of the site.

Frequency.—The usual difficulty in obtaining accurate statistics in obstetrics is nowhere better illustrated than in attempting to determine the frequency of the occurrence of "adherent placenta."

Comparatively few reports have been published from hospitals, and the general practitioner has contributed almost nothing. Then, too, the available reports are not always satisfactory, as for instance, the "Medical Report of the Society of the Lying-in Hospital of New York" (1897) shows that the placenta was manually removed 182 times in 9034 labors, or 1 in every 49.6 labors, which demonstrates that manual removal of the placenta is far more frequent there than elsewhere recorded, even if the placenta previa cases are included in the statistics, as doubtless they are.

In the Chicago Lying-in Hospital and Dispensary, the placenta has been manually removed only 6 times in 2529 cases, and only 4 times for "adherent placenta."

Judging from their figures, it would seem that the placenta is less frequently adherent than Dorland's and Hirst's reports would indicate, and that 1 in 500 or 600 labors would be more nearly correct. Howitz, however, in 1000 cases has seen no bad cases of adherent placenta.

Owing to the immaturity of the placenta and the absence of the usual degeneration, the placenta seems to be adherent more frequently in abortions than at term; thus Bedford Brown found 30 cases in 200 abortions, or 15 per cent.

Mortality.—All observers agree that the condition is extremely dangerous for the mother, the most frequent cause of death being sepsis, but hemorrhage plays no small part. In Winckel's 50 cases 9 died, or 18 per cent.

Hirst gives a mortality of 7 per cent., which he attributes to sepsis. The mortality from sepsis will always preponderate in those cases which are treated expectantly, while the hemorrhage will cause the greatest number of deaths in the recent cases.

Etiology.—The origin of the affection is somewhat obscure, but so many concurrent affections have been assigned as causes that it seems best to discuss the etiology under three separate headings:

1. The causes attributed to the placenta. 2. The causes attributed to the uterus. 3. The causes attributed to the uteroplacental connection. Among the causes attributed to the placenta, it is found that most authors give inflammation of the placenta the first place.

There is a diffuse form of inflammation which arises in the connective tissue, and the placenta becomes firm and pale. After the irritative proliferation produced by the inflammation subsides, the connective tissue contracts, compresses the villi, and may result in death of the fetus by diminishing the blood-supply, while fatty changes may occur in the placenta, which either becomes prematurely detached or abnormally adherent.

A second form arises in the arteries and adjacent tissues of the fetal placenta and gradually involves the entire organ. As the inflammation proceeds the tissues become indurated and fibrous, adhesions form between the placenta and uterine walls so dense that it is often difficult to distinguish the point of separation post-mortem. Placentitis is an extremely rare disease, and while many cases may and do pass unrecognized, yet other factors possess etiologic interest. In Brown's series he traced three cases to traumatisms, but these could probably be regarded as cases of placentitis. He also regards rheumatism as a cause.

Syphilis may give rise to inflammatory changes in the placenta, which would produce adhesions, but as many cases occur where neither maternal nor paternal syphilis can be traced, this can only be regarded at most as an occasional cause, as in Brown's two cases.

Placenta succenturiata has an etiologic importance from the fact that the main portion of the placenta could be delivered, and the connection between the parts being broken, the smaller portion might remain.

Placenta previa is the most common placental anomaly in connection with adherent placenta, which Chazan claims results from the partial loosening of the placenta before labor, whereby the normal mechanism of detachment is interfered with and manual removal is required. His second explanation is more plausible and shows that the placental site being farther removed from the point of greatest contraction, less power can be applied by the uterus in producing the detachment. Hence it is only relatively adherent, but this conforms more closely to our knowledge of the mechanism of the third stage.

Again, an abnormally thin placenta, from whatever cause, will be more difficult to expel, because it will double up as the uterus contracts, just as soft glue spread out on the hand will follow the contractions of

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the palmar surface. In the four cases herewith reported, the placentas exhibited this characteristic thinness.

Among the causes attributed to the uterus, most writers mention endometritis, but some other factor must also be present, for endometritis is a very common condition and the placenta is very rarely adherent. Again endometritis is much more common in multiparæ, and adherent placenta shows no especial predilection therefor. A previous endometritis may, however, furnish the starting-point of a placentitis.

Atony uteri is probably the most important factor. This affection occurs in two forms. The first, affecting the whole uterus and manifest throughout the labor, is greatly improved by external manipulation, while the second form affects the placental site (Engel) and occurs in varying degrees of intensity, the most severe being sometimes called "paralysis of placental site," and forming a knob-like projection through the contracting surface of the uterus; it may lead to inversion.

The pathology of atony uteri is obscure, but a few of the conditions producing it, which in turn must become causes of adherent placenta, are primary pain, weakness, weak constitution, exhaustion, extreme uterine distension, excessive uterine exertion, as against some pelvic resistance, poorly developed musculature of the uterus, etc., but atony uteri occurs in sound healthy women, in protracted labors and in precipitate labors, so that the above factors are not the only ones concerned, and one feels obliged to consider Rokitansky's undemonstrated theory that nervous depression may be a cause of impaired activity at the placental site. "Paralysis of the placental site" might explain the frequent association of adherent placenta and inversio uteri, as in the Stone, Lee and Beckmann collections.

Indeed, the frequency with which adherent placenta is found in connection with inversio uteri is remarkable, and one can hardly avoid the belief that a causal relation exists between them. In Stone's series the placenta was adherent in 10 of the 25 cases reported, or 40 per cent. In Lee's collection of 148 cases he found the placenta adherent in 67, or 45.4 per cent. In Beckmann's collection of 100 cases the placenta was adherent in 25. In 21 others the inversion was said to be due to "traction on the cord" in attempts to deliver the placenta. It would not appear illegitimate to assume that placentas resisting so much traction were measurably adherent, and counting these the total would be 46 per cent., or a trifle more than Lee's. It has not been possible to find one factor, or set of factors, common to any large proportion of these cases.

Stone thinks a lack of contractile power in the uterus is responsible for both conditions, but what reason can be assigned for the lack of uterine contraction unless it be atony uteri or some form of defective innervation?

In the third etiologic class we find the old authors (like d'Outrepont, Simpson, et al.) proposing transudation, exudations, etc., which change into connective tissue.

Winckel mentions extravasations of blood into the decidua serotina and thence into the intervillous spaces, or they may arise from the vessels of the villi and afterward become changed into firmer connective tissue.

In opposition to this theory, Chazan says that we often find old blood-clots in the placenta and no trace of fibrinous organization. Godson, however, in 1896, reported the microscopic examination of placentas after various periods of retention, and in one retained in utero a few days only, the intervillous spaces were filled with altered maternal blood, organization had begun, strands of fibrin were present, but the connective tissue was not much altered, whereas, in another placenta, retained about six weeks in utero, the process was quite advanced, the maternal blood being organized, the villi degenerated, the connective tissue compressed. Hertzog shows that the maternal blood in the intervillous spaces is so different, even in a fresh specimen, that it is probably the cause of many of the emboli and thromboses which occur in pregnancy.

Nyulasy claims that the most common condition met with in extensive adhesion is a deposit of fibrin originating in the decidua and involving the opposing surfaces of the placenta and the uterus, the cement substance nearly always being a tough, fibrous material difficult to separate from the uterine wall.

The microscopic report of the curetted pieces from Nyulasy's case showed delicate connective tissue and decidual cells, the origin of the fibrinous cementing material not being known.

The principal objection to accepting an alteration in the uteroplacental connection as a cause of adherent placenta is the scarcity of definite anatomic proof of the existence of the pathologic change. Maier says he has never seen cases with exudate, and the report of the microscopist in Nyulasy's case was not complete in this respect. But Neumann's exhaustive investigation with microscopic data shows that alterations in the uteroplacental connection do occur, and are responsible for the adherence of the placenta in a certain proportion of cases. Langerhans finds neither the cell proliferation nor connective-tissue development so marked as one would expect in a condition resulting from inflammation. When the manual removal preserved the serotina, he found that it contained more intercellular substance than usual in the deeper layers and in the septum; the cells were smaller and mostly of spindle shape. The grandular ampullæ were defective in development—briefly, he found a tissue much firmer and more compact than usual. He believed that this condition was incontestably the cause of the adherence.

Consequences of retention.—With a mortality of at least 7 per cent. attending the affection, it is interesting to know what the consequences might be if the placenta should not be removed. Fortunately this condition has been studied by many observers and numerous facts have been obtained.

The subject is susceptible of division into two classes: 1. Where the placenta is partially detached. 2. Where the placenta is entirely adherent.

The two divisions cover all the stages of pregnancy and labor, with some modifications. In all cases of the first class there is hemorrhage, more or less serious, which requires the removal of the placental structure in order that the uterus may contract and the hemorrhage be stopped.

In the second class we find many different reports. The placenta may be retained for a period varying from a few hours, when it may be spontaneously expelled, to eight or nine months, as in Godson's case, when some pathologic condition, amenorrhea or menorrhagia, leads to an investigation and the difficulty is diagnosed. In the case reported by Gallant the pla-

centa was retained a year and a second pregnancy with placenta previa occurred.

Whether the placenta grows or not during its retention after the expulsion of the embryo has developed considerable discussion, but the weight of evidence seems to show that unless it increases pathologically it can not be said to really grow, although Audebert and Sabrazes, following Clarence Webster, positively declare that the constituent placental elements do not remain inert in the uterine cavity like a foreign body, but continue to proliferate. It is more probable that the fetal elements remain stationary, or retrograde, unless altered by the maternal elements, which remain active under certain circumstances.

But sometimes the retained part exfoliates and cure results; at other times the uterine mucosa becomes inflamed and infection and hemorrhage necessitate an operation.

Hartman and Toupet have classically summarized the changes which may occur in the retained placenta or placental fragments, the most common being decidual endometritis, which is characterized by hemorrhage; chorionic villi are found in the discharge and relief is obtained by currettage. Then, too, the fragment may undergo sclerotic changes and contract, but it continues attached to the uterus and lives.

The fragment may remain adherent, the cells proliferate and form a polypus, as in the case reported by Doran, which he termed a benign deciduoma.

The retained portion may also give rise to hydatiform mole, which seems to correspond to myxomatous degeneration of chorionic villi, and finally, malignant deciduoma may take its origin from this retained fragment, with a fatal result.

So that aside from the constant menace from hemorrhagic and septic conditions, the retained placenta or a fragment thereof may at any time become the seat of a neoplasm which threatens the function of the uterus and occasionally requires hysterectomy for relief.

Godson's case was accompanied by amenorrhea, but in all of Klasson's cases hemorrhage was a marked symptom. In the third case reported by Gottschalk the woman retained the placenta in utero for three months after an abortion, without symptoms.

Diagnosis.—The diagnosis is easily made in recent cases attended by an obstetrician. By abdominal palpation two conditions may be observed; in one the uterus is large and soft, responds slowly to massage and is doughy to the touch, and here the placenta may be either entirely or partially adherent. In the second form the uterus is hard and moderately contracted below the level of the navel; this is the so-called "hour-glass" contraction, and may be present with adherent placenta, but the usual condition with these findings is the simple retention of an already detached placenta.

In cases attended by midwives or other incompetent persons, the history, or the protrusion of the cord will furnish a ready solution, even if the hemorrhage, which is usually marked in these cases, does not prompt to instant examination. External hemorrhage, may not be present, while internal hemorrhage exists behind the circularly adherent placenta to an alarming extent, as in Kuhn's case. If the history is unobtainable from difference of language, and the cord has been torn off by tractions in fruitless attempts to deliver the placenta, a thorough revision of the uterine cavity must be made. After the most rigorous attention to the hands, one is passed into the vagina and the finger beyond the os internum will at once detect the adherent or partially detached placenta. Sometimes, however, owing to spasmodic contraction of the internal os, the finger can not enter, and Gilis reports a case where relaxation did not occur until eleven hours postpartum, when the placenta was spontaneously delivered.

In these cases it is recommended to secure complete anesthesia, as in Gottschalk's case, and then pass first one, then two and three fingers, until access to the uterine cavity is obtained.

In cases of placenta succenturiata, confusion may arise from the detachment and delivery of the placenta major while the smaller part remains adherent.

An examination of the delivered portion will reveal on one side the severed mouths of the vessels at the point of separation from the smaller portion, if one membrane unites both parts of the placenta. This is known as Tarnier's sign, but it will be useless if the smaller portion is located in juxtaposition to the placenta major but not united, as the vessels in this case would not lie in the membranes.

This sign would also fail if the membranes were torn off close to the placenta proper, leaving the membranes which united the two masses attached to the segment in the uterus.

In old cases, without the history, the diagnosis usually can only be made after the patient is prepared for operation, and occasionally from a microscopic examination of the curetted fragments.

The indications for removal may be considered under two heads: 1, after abortion; 2, after labor.

1. *After abortion.*—If there is any hemorrhage, elevation of temperature or suspicious discharge, or if any fragments project from the uterus into the vagina the removal should be immediate. Otherwise, it is justifiable to wait and watch the case carefully. It is probable that the placenta will be discharged witnin a few days in the majority of cases. The presence of a suspicious odor or discharge is a signal for operative interference.

2. *After labor.*—The removal is indicated whenever the usual methods have failed (Winckel three to twenty-four hours), and sooner, if any symptom on the part of the mother (fever, hemorrhage, exhaustion or collapse) threatens her life.

Under the indications which have been given, the manual removal of the placenta is not only justifiable but imperative.

Chazan objects to the method advised by most operators, and claims that the separation is not in the line of least resistance; not where the division properly occurs. He believes that by the method usually described, the placenta is not separated in the serotina but, either at the expense of the uterine musculature or in the fetal placenta, an artificially created line of separation which may possibly perforate the uterus, and at best only results in bringing away string-like adhesions, which are part of the chorionic villi. He avoids the introduction of the hand into the uterus for fear of sepsis, and avoids contact with the placental site for the same reason. He says that in most of these cases the placenta is already partially detached, and his method, successful in twenty cases, is to grasp the loosened part with a thoroughly aseptic hand, and by slow steady traction secure the release of the adherent portion. In two of his cases the detached portion was central, and here he bored the finger through

the middle, hooked it underneath, made traction and detached the placenta.

It seems probable that Chazan has been very fortunate in his cases, for the thin fibrous placentas which are sometimes present, like the three reported by Gottschalk and the four herewith presented, could not be treated thus. In these cases the placenta could be scraped off the uterine mucosa only with the greatest difficulty. Again, if the asepsis and antisepsis is rigorous, the introduction of the hand is not injurious and there is less danger of leaving a fragment of the placenta within. He does not describe how he treats those cases which are entirely adherent and have no loosened part to take hold of. The two cases with central detachment were probably fast becoming loosened by the Schultz method when he interfered.

In Kuhn's case the cavity formed by the detachment of the central portion was filled with blood, and by accident the operative finger perforated the median portion and an alarming hemorrhage resulted. The most of the placenta was removed at once, but the entire placental circumference was so closely adherent that it resisted four different attempts at removal, each attempt being accompanied by hemorrhage from the enlarged uterus, which could only be controlled for a short time with tampons. The patient finally died of sepsis, fifty-eight hours after a normal delivery. Unfortunately no post-mortem could be had.

The following method seems to fulfill all the indications: The external genitalia are thoroughly scrubbed with soap and prepared as carefully as for any serious surgical operation; a vaginal douche of 2 per cent. lysol is given and after giving the utmost attention to the nails, hands and arms, the hand is doubled up into cone-shape and guided by the cord (if present) to the placental site, counter-pressure being made with the external hand. The fingers are inserted between the placenta and the uterus, and the former carefully stripped from its base, leaving the least possible amount of placental tissue; it should then be removed with the hand, while the external hand secures vigorous uterine contraction by massaging the uterus, according to Credé's method. Deep anesthesia is necessary, using ether if the heart is weak.

If all the adherent portions of the placenta are not removed, and can not be with the fingers alone, as in Kuhn's case, the sharp curette is recommended by some writers. The utmost care is necessary in the use of the instrument at this time, as the uterine walls are thin and soft and the curette may easily penetrate to the abdominal cavity, or large portions of uterine tissue may be unnecessarily removed.

In Duhrssen's case, it seemed unsafe to continue with the curette, for this very reason, and after tamponning the uterus with iodoform gauze for forty-eight hours, the placental remnants were easily removed by the finger. On the whole, the tampon is much safer and equally as effective as the curette, if employed under extreme antiseptic precautions.

In case serious sepsis supervenes in an old case, or in a recent case, which has been expectantly managed the only recourse is in a vaginal hysterectomy, as in Duhrssen's case, where the uterus was removed for apparent defects in the wall and continuance of hemorrhage. If for any reason (condition of woman, lack of assistance, failure with fingers, etc.) delay of operation is required, the uterus must be tamponned with from three to five yards of iodoform gauze, until the adherent tissue in the uterus is loosened and thrown off.

Elevation of temperature is best controlled by diffusive stimulants and quinin. As soon as the placenta is removed, ergot may be administered and the uterus kept in contraction; the signs of hemorrhage must be looked for and the discharge carefully watched. If the heart shows signs of weakness, strychnin or digitalin should be given hypodermically. When a patient shows the effects of the hemorrhage, the normal salt solution should be injected under the breast to the amount of from one to three quarts. This must be done very slowly, keeping the reservoir at such a height that it will require ten minutes for each quart to enter. The patient should not be left until the danger of collapse or acute anemia is averted.

Case 1.—Mrs. M. (No. 929, Dr. De Lee), aged 37; Aug. 24, 1897; VIIpara, full term; previous labors easy; labor began 5:10 A.M.; temperature 99.2; pulse 76; membranes ruptured spontaneously, 9:27 A.M.; delivery spontaneous; Kristeller expression, 11:36 A.M.; head being down on perineum and no progress for an hour; after-pains every five minutes, strong; slight hemorrhage until forty-five minutes afterward when Credé was attempted in vain; large blood-clots but no placenta; uterus would rise up and become soft and boggy; Credé again in vain; woman acutely anemic; uterine massage, aortic pressure; fluids by mouth, strychnin solution 1-30; one quart saline into right breast; manual removal; stimulants; watched for twenty-four hours; in third stage two hours and thirty minutes; placenta adherent all around except at one point from which hemorrhage came; slow recovery.

Case 2.—Mrs. S. (No. 1234, Dr. De Lee), aged 25; Ipara; typhoid fever four years ago; confinement Jan. 27, 1898, second stage terminated at 12:45 P.M.; pulse weak, but regular; almost no hemorrhage until 1:30, when, on account of oozing, a fruitless attempt was made to expel placenta by Credé; maneuver was repeated at intervals of ten minutes, until 2:30 P.M.; at 3:00 P.M. she began to suffer from loss of blood and manual removal was indicated, so patient was put on table; strychnin solution, grs. 1-30 hypodermically; normal salt solution 1 quart, injected into right breast, also a few ounces by rectum; ether anesthesia, manual removal moderately difficult; 1 quart normal salt solution into left breast; placenta removed about 4:30 P.M., very thin and rather small; stimulants for twenty-four hours; recovery.

Case 3.—Mrs. R. (A.) (Case 1554, Dr. Reed), Italian; aged 42; VIIIpara; previous diseases negative; first menstruation at 15 years; menses regular; no pain; previous labors normal, eight days in bed; two miscarriages at three and five months; first labor at age of 28, last six years ago; present pregnancy normal; no edema; labor July 14, 1898, 2:45 P.M.; temperature 98.4; patient quite emaciated; pulse 90, good, O. L. A.; no internal examination; delivery spontaneous at 4 P.M.; after-pains every three minutes, strong; some hemorrhage; cord 80 cm., false knots; uterus 14 cm. above pubes, hemorrhage; Credé after twenty minutes; uterus massaged; abdominal aorta compressed; diagnosis of adherent placenta; Credé again in vain; salt solution per rectum; pulse rapid, patient restless, strychnin hypodermically; manual removal of placenta at 5:20 P.M.; uterus contracted well; adhesions quite intimate and separation difficult; placenta very thin and flat, a few white infarcts; abundance of fluids by mouth; ergot; temperature 100 on second day; recovery.

Case 4.—abortion.—Mrs. M., aged 40 (App. No. 3075, Dr. Bayer); first menstruation at 15, regular, scanty; family history good; previous labors normal; fifth month of gestation; dispensary summons Feb. 15, 1899; patient complaining of severe pain in back; uterus contracting, patient quite pale; abdomen thick and pendulous; woman generally ill-nourished.

Examination: Some effacement of os, one to two fingers' dilatation; os filled with a soft fluctuating mass, hard body high up. Diagnosis: Inevitable abortion. Clinical course: At 1 P.M. patient had a strong pain and a macerated fetus of about fourteen weeks was expelled; patient had a severe hemorrhage in from three to five minutes; Credé expression of placenta was attempted three times without effect; hemorrhage continued; diagnosis, adherent placenta; patient pale, pulse rapid, symptoms of collapse; manual removal of placenta at 1:30, pulse 140; uterus contracted slowly under massage; hypodermic of strychnin, 1-30, twice with an interval of forty minutes; brandy and strychnin by mouth; 1 quart salt solution injected into right breast; ergot, 2 drams, strong coffee and saline solution per rectum; placenta, small, thin and removed with difficulty; acute anemia, slow recovery.

BIBILOGRAPHY.

Ahlfeld: Lehrbuch der Geburt.
Abegg: Monatschrift f. Geburt., Bd. xviii, 1861.
Arch. f. Path. Anat., Bd. cl.
Audebert et Sabrazes: Annales de Gynec., Paris, 1897.
Arch. de Tocologie, 1894.
Brit. Med. Jour., 1896, ii, 1188 and 1823.
Budin: Le Prog. Méd., 1895.
Brit. Med. Jour., 1896, i, 1141.
Beckman: Zeitschrift f. Geburts. u. Gynec., Bd. xxxi.
Beitrage f. Path. Anat., Bd. xxxviii.
Caw: Brit. Med. Jour., 1891, i, 404.
Clark: Trans. Am. Ass'n. Obs. and Gynec., 1890.
Chazan, Samuel: Klin. Vorträge, No. 93, 1894.
Centralb. f. Gynec., 1897, p. 174.
Doran: Trans. Obs. Soc., London, 1895.
Eden: Jour. Path. and Bacteria, Edinburgh and London, 1896-97.
Eaeer: Ann. Gynec. and Ped., 1890.
Eckhardt: Zeitschrift f. Geburts. u. Gynec., Bd. xix, H. 2.
Gallant: Med. Record, N. Y., 1895.
Gottschalk: Arch. f. Gynec., Bd. xxxvii, 40.
Gottschalk: Berlin Klin. Woch., xxxiii, 1896.
Godson: Brit. Med. Jour., 1896, 1.
Gilis: Arch. de Tocologie et Gynec. de Paris, 1894.
Hart: Am. Jour. Obs., Voi. xxv, 1892.
Hartman et Toupet: Annales de Gynec. de Paris. 1894.
Kuhn: Kansas City Med. Index, 1892.
Lahs: Arch. f. Gynec., Bd. iv.
Merttens: Zeitschrift f. Gynec., Bd. xixx.
Nyulasy: Intercolon. Med. Jour. of Australasia, 1896.
Phillip: Trans. Obs. Soc., London, 1895.
Porrier: Thése de Paris, 1894.
Sims: Ann. Gynec. et Ped., 1889.
Stone: Am. Jour. Obs., 1898.
Winckel: Text-Book Midwifery (Edgar).
Zeitschrift f. Gynec. und Geburts., 1896-97.
Duhrssen: Münch. Med. Woch., No. 21.
Langerhans: Arch. f. Gynec., Bd., viii.
Fothergill: Brit. Med. Jour., 1898, 1.
Brown: Trans. So. Surg. and Gynec. Ass'n., 1896.
Lee: Am. Jour. Med. Sci., 1860, p. 313.
Neumann: Monatschrift f. Geburts. u. Gynec., 1896, Bd. iv, H. 4.

WHY IS THE PROFESSION POOR IN PURSE? AND HOW TO REMEDY IT.*

BY C. H. REED, M.D.

TOLEDO, OHIO.

A few days ago, speaking about present social conditions, one of our prominent physicians, located in a prominent part of this, our metropolis, said, "Only yesterday I heard of a doctor in this city who was found crying because he was hungry."

If any excuse were needed for discussing questions of this kind in a scientific body like this, such scenes as these, occurring among members and professional neighbors, are certainly sufficient.

Ours is the grandest, the noblest of all professions, save, perhaps, one, and its high aim, the relief of human suffering, physical or mental, should never be prostituted to the baser object, gain. Nevertheless, the present methods of securing a livelihood compel our devoting at least a part of our attention to the consideration of our purses. Necessaries we must have or die. Luxuries for our families and ourselves we should have, but the cases just referred to prove that not all can always have even the necessaries.

Why is this? Is it right that this condition should be? If the conditions of the social relation which produce such effects are wrong, and they must be, then these effects are avoidable. They need not be. Wrong is not a necessity.

If these troubles arise from the poverty of purses, the question naturally arises—why the poverty, and "how remedy it?"

Remedies! Why, doctors have as many remedies for hard times as old women have remedies for worms, and usually just as logic and about as effective. The physician who told me of, and deplored the condition of the professional brother found crying from hunger did not venture to explain the cause of, nor the necessity for, such deplorable distress, neither did he explain why it was any worse for a doctor to cry from hunger than for anyone else; but he has a remedy. He says, "I have been called a crank because I have advocated, in season and out of season, that physicians ought to, every year of their lives, charge larger and larger fees, thereby leaving those who are less able to pay for the younger men to make a living by treating them. I believe, as physicians, we ought to get together and 'divide up the day'. If as a class, we physicians had half sense, and would charge wealthy men what it is worth to carry the responsibility of their sickness, there need not be a hungry physician in Toledo; but here is the way the matter stands: If a physician were to charge a man who is worth $50,000 what he really ought to charge him, every other physician would gladly go into court for a dollar, and testify that the charge was exorbitant."

Now, honor is supposed to be the manly thing, but justice beats it. Instead of its being the depravity of doctors, are not the necessities arising from the financial condition of the country, this thing of which we complain so much, the incentive, the why such testimony is so easily had? If it be, then high and higher fees are not the cure, except for those who succeed in getting them. For others the effect would be less fees—except the old physician should distribute his large fees among them. But let no one imagine for a moment that all poor doctors are young doctors. By this plan it is possible our hardships could be lessened.

If all men have equal rights, as our Constitution declares they have, we believe, a question of justice arises here. It is well known that in order to learn to swim we must go into the water. So of the practice of medicine. All things else being equal, the experienced physician is more efficient than the inexperienced. Now, if all men have equal rights, must not this equality of rights extend to a choice of physicians? Is one to be denied the opportunity of calling to the aid of those most dear, his old and trusted family physician, and that, because, through no fault of his own, his income has not kept pace with the inexorable growth of the fee bill? Is he no longer to profit by the experience the practice in his own family has afforded the doctor? Is there an honorable, noble-hearted doctor living who would refuse him? It is evident that this remedy, put into practice, would do violence to justice and fail.

The author of a paper read before this society, published in the *Toledo Medical and Surgical Reporter*, February, 1898, attributes the cause of the physician's financial distress, the major part at least, to a different cause, and recommends a different remedy. With him the cause is carelessness in charging and collecting. He points out the great results following the neglect of little things and shows by figures that in strict attention to the little matters is the remedy to be found. We quote: "Suppose," says he, "that one, as most do, neglects to charge, and of course for that reason, to collect $1.43 a day or $10 per week. If, instead, he collected this and put it out at 8 per cent. interest for twenty-one years, he would at that time have the snug sum of $27,800, $10,920 actual collections and $16,880 interest on dividends."

This solution of the question of empty purses differs somewhat from the other. It looks more feasible because figured out so one can almost see the dollars staring him in the face. The first suggestion being so foreign to the principles of justice scarcely needed more than to be stated to be doubted. The last, being reduced to such a mathematic certainty, justifies a mathematic analysis.

*Read before the Toledo Medical Association, April 14, 1899.

It is intended that we all shall reap the benefits from the remedy suggested, hence all must be considered in our calculations to determine its feasibility or value. So, because it is very probable, it is admitted that the average neglected charge is $1.43 daily or $10 per week, and that in twenty-one years the amount thus gathered would be the handsome sum of $27,800. We must remember, however, that this is the amount now lost and has nothing to do with that which we do collect. This is a surplus above ordinary receipts, to be saved for a reserve fund in old age.

By Polk's "Medical and Surgical Register of the U. S. and Canada" (1898), we find in round numbers, there are 116,000 doctors in the United States. If this estimate be correct, their total extra accumulations in the twenty-one years would then be, by collections $1.266,720,000, and by interest or dividends, $1,958,080,000, a grand total of $3,224,800,000. Now, when it is known that there is only about $1,200,000,000 of money of all kinds in the United States, what effect on our collections not forgotten, and upon the financial prosperity of other people, this would have becomes a mystery whose explanation must be left to the discoverer of the remedy.

The truth of the matter is, the profession is subject to conditions which, unaided, it can not control. The question is a scientific one, and its solution, like the completed solution of all scientific questions, can develop but one answer. This fact, that there is but one answer, may explain at least a part of the difficulty so many have in finding it.

The medical profession, whether considered as individuals or as a whole, like all individuals or governments, is a part of the universe. Because this is so we must be governed by or be amenable to the laws governing the universe. It is only in or by obedience to natural law that planets and stars can move harmoniously in their spheres, so it must be with man in his. The former are governed by natural law; men, by moral law. This recognizes the equality of man and governs in all his relations to his fellow-man. Moral law, however, emanates from the same infallible source as do those we call natural laws, hence, moral law must also be a natural law, and therefore, equal with any other natural law in authority. Moral law, therefore, can no more be suppressed by man than can be the law of gravitation or any other natural law. The violation of moral law then, must also entail a penalty, punishment, as surely as does the violation of any other of the laws of nature. The social conditions that make doctors cry for bread are the result, then, of wrong, of wrong business methods, of the violation of moral law. They are a necessary sequel of wrong and follow wrong methods as necessarily as effect follows cause, or disaster follows evil.

Money, the absence of which makes poor purses, is a material thing. It is made out of matter. It is a tool used in buying, among other things, bread. That all men may buy bread and none may cry from hunger, or that all may be and continue easy in purse, money must be sufficiently distributed, be of ample quantity, and remain, approximately at least, evenly distributed.

Though money is matter, unlike matter it is destructible, yet, like matter, in its distribution it is subject to natural law, and any change in its distribution can occur only in compliance with the two fundamental mathematic laws governing the distribution of all matter—subtraction and addition. Before addition, subtraction must be. Before some purses can be made plethoric others must be made anemic. Before the few can add millions to the contents of their purses, these same millions must be subtracted or extracted from the purses of the masses. Then, as our profession's work is almost wholly among the producing masses, as long as this process of making millionaires goes on, is the fact that we are poor in purse any longer a mystery? The cause remaining active, must not our poverty as long continue, and grow worse and worse? If we would have the relief for which we so constantly hope and so constantly strive, must we not first see to it that moral law regarding the equal rights of man is respected; that the producing masses are enabled to retain to themselves all they produce or earn, or its equivalent? This secured to them, they will be able to give value in return for value received from us. This secured to each member of society, neither we nor others need cry for bread or seek relief in a suicide's grave.

The cause of our profession's impoverishment diagnosed, the remedy is self-evident. A change in business methods that produce the conditions, this unequal distribution of wealth, must be made. There is no alternative. This, or the cry for bread in ever increasing volume, must go on. Business must be conducted in obedience to the mandates of natural or moral law, first principles, or the principles upon which is founded the social relation, the equality of man. This, nothing more, nothing less!

The eternal law of justice is the yardstick with which every transaction between man and man should be measured, and with it, must be measured. Let every law pertaining to the settlement of disputes be wiped off our statute books and every question pertaining to the business or social relation be adjudicated by the cardinal principles of democracy: "equal rights to all, and special privileges to none." No other law is needed. Our multiplicity of laws serves only to confuse, and most of them were made but to serve some selfish purpose, to gain some advantage over others, or another.

The underlying principle governing the whole matter is the fact that all men were born free and with equal and inalienable rights. No one disputes this fact. But if it be a fact, no man has any ownership in man and therefore has no right to his labor except in exchange for a full equivalent. Our agreements or bargains cut no figure in the question. "The sacred right of contract" is a myth and a snare. Man's rights are inalienable. No man has or can have any right in any way to injure any man. He has no ownership in him, his labor, nor his goods. Yet, notwithstanding this, the first thing we do with our child is to teach him to beat his playmate in a trade, chide him for his failure, and praise him for his success. Is it any wonder that the present deplorable and damnable social conditions of our country prevail? For them, who is responsible? Does not the earth bring forth an abundance for all?

No man has a right, more than any other, to the earth and therefore to the things necessary to enjoy life, liberty and happiness. That is, he has a right to only that which he himself earns, or produces. This being so, then every man must have an equal right with every other man to the opportunities to earn, or produce. The equal right to these is what the external law of justice allots to every man and requires that every man should not only have, but control. The non-compliance of our business methods with

this immutable law must entail punishment by disarranging social conditions; the producing of millionaires, and, their necessary concomitant, paupers; by producing the inability for the many to obtain the necessaries of life or for the enjoyment of happiness; by producing the inability to pay doctors and with this, the necessary effect, that doctors, with other indigents, must cry for bread.

To remedy the poverty of their purses, physicians must become teachers of the people. They must teach, not hygiene less, but scientific economics more. They must teach the incontrovertible fact that to maintain equal distribution of wealth so all may be able to pay and all may receive pay, every man must be enabled to keep for himself all he earns or its equivalent. To do this we must teach that exchange must be even; that profit, the gain of one and the loss of another, is the whole cause of the excessively unequal distribution of wealth, and must therefore be eliminated from business methods; that usury of all kinds is robbery, pure and simple; that to mortgage the labor of the unborn to pay interest and bonds, debts of our creating, is in direct violation of every principle of honor or justice, is cowardly, dishonest, homicidal, and can result only in the further aggrandizement of capital and the greater impoverishment of the coming producers; that great riches gathered by present methods is prima facie evidence of either dishonesty or ignorance, and that their possessors merit, socially, only contempt. In short, we must teach that every man must be compelled to eat his bread in the sweat of his face, and no well man must be permitted to eat in the sweat of another's face, neither in the sweat of capital's face. We must teach that all tools used by individuals or corporations for enriching themselves, followed by the necessary effect of impoverishing others, must be owned and controlled by the people themselves. This we must teach because government ownership eliminates profit and with it its evil effects. Individuals and corporations can run business only for profit. But the government, because it would be as impossible for it to get rich off itself as for the individual, can not run business for profit, the demon at the bottom of the whole trouble. For this reason the government must own and conduct at least all business known under the name of public utilities. Except usury, the profits from these are among the most common and effective of all causes of unequal distribution of wealth. They are means by which the control of another's opportunity to live upon the earth is got and held. Business must be conducted on the co-operative plan. The co-operative plant must include every man as an equal owner. This done, profits, which then would consist of new products only, i. e., new additions to wealth, would be equally distributed among all the members of the corporation, that is all the people. No harm, but only good, could then come from profit or any gain. In this way, and only this, can business methods be made to comply with God's eternal fiat regarding the equal rights of man.

In this, and this only, is found, not a temporary remedy, but the cure for the poverty of purses; the people's and, with theirs, the doctor's.

BY THE WILL of William McMullin, Philadelphia, who recently died in Ireland while on a visit to that country, $500 has been received by the Episcopal Hospital of Philadelphia.

TRACHOMA TOXINS AND ANTITOXINS.

I. EFFECT OF THE TOXINS ON DIFFERENT ANIMALS. II. EFFECT OF THE TOXINS ON THE CONJUNCTIVA AND EYE. III. PRODUCTION OF ANTITOXIN. IV. TRIAL OF ANTITOXIN IN TWO CASES. V. RESULTS.

BY E. F. SNYDACKER, B.A., M.D.
CHICAGO.

In another paper (vide JOURNAL, Feb. 4, 1899) the diplococcus of trachoma was described as seen in the tissues and on various culture-media. It still remained to study in detail the action of its toxins and to produce, if possible, an efficient antitoxin. A flask of bouillon was inoculated from a pure culture of the diplococcus and allowed to stand in the incubator for about two weeks. At the end of that time the bouillon was filtered through a Kitasato filter, a period of about ten days being consumed in this process. The filtrate and precipitate at the end of that time were placed in carefully sterilized flasks, and to each of them were added trikresol .5 per cent.

On November 23, at 4 P.M., 1 c.c. of the filtrate was injected into the flank of a guinea-pig, whose temperature at the time of injection was 99.75 degrees; the next day, at 9 A.M., the temperature had risen to 102 5, and at 2 P.M. to 103.5, where it remained for almost six hours and then gradually declined to where it had been before the injection.

When we consider the amount of the toxin used, the small size of the animal and its susceptibility to the various bacterial toxins, this reaction seems very slight, and still the fact that there was a reaction shows that in the economy of the animal doubtless some antidote to the poison was being created.

Larger amounts injected into different guinea-pigs were followed by increased reactions, till it was found that the injection of 4.5 c.c. of the toxins caused the death of a guinea-pig weighing 300 grams in about twelve hours. The injection of 2 c.c. of the toxins under the skin of a rabbit whose temperature at the time of inoculation was 100.25, was followed by a rise of 2.5 degrees, by a diarrhea and a loss of appetite; these symptoms disappeared at the end of three days.

An injection of 4 c.c. of the toxins into the peritoneal cavity of a dog caused a rise of temperature of only 1.5 degrees. The lethal dose having been well ascertained, on November 29, at 9 A.M., 1 c.c. of the toxins was injected into the arm of M. C., who was at the time receiving injections of strychnia for an optic atrophy; the temperature at the time of injection was 98.6. At 2 P.M. it had risen to 100, the patient complained of frontal headache; at the site of injection there was some pain and redness. At 5 P.M. the temperature rose to 101, the patient complained of malaise and headache, and there was local edema. The next morning the temperature was 101.5, and then gradually subsided to normal.

I watched with especial interest to see whether the toxins would have any selective action on the mucous membranes, but was unable to determine any at all. One point was of especial interest: the fact that the human subject was far more susceptible to trachoma toxins than animals. Where the injection of 1 c.c. of the toxins into such a small animal as a guinea-pig caused a rise of temperature of only 3.75 degrees, the injection of the same amount into a human being weighing many times as much as the guinea-pig caused a prompter and almost equal rise of tem-

perature, while the injection of four times that amount into a dog caused a reaction of only 1.5 degrees.

EFFECT OF THE TOXINS ON THE CONJUNCTIVA AND EYE.

The injection of the toxins under the conjunctiva of rabbits and guinea-pigs was followed by a most marked reaction. The ocular and palpebral conjunctiva became red and swollen. There was marked chemosis, and the palpebral conjunctiva became thickened and spongy; there was a secretion of a thin, ichorous character; the cornea remained clear.

The injection of a few drops of the toxins into the anterior chamber of the eye of a guinea-pig was followed by violent reaction. There was infiltration of the cornea along the track of the needle, marked pericorneal and conjunctival injection, swelling of the lids, watery secretion, haziness of the anterior chamber and muddiness of the iris. These symptoms all gradually disappeared.

THE PRODUCTION OF ANTITOXIN.

Numerous methods have been employed in the production of antitoxins, and many theories advanced to explain their action. The whole subject is far from being on a scientific basis, and the results arrived at have been largely attained through empiric means. The outlines which Behring has appended to his book on "Blood-serum Therapy" contain so much of the subject in so brief a space that I am tempted to translate and incorporate them in this paper.

SCHEME I.—METHODS OF CONFERRING IMMUNITY AGAINST INFECTIOUS DISEASES.

A. Conferring immunity by means of the same toxic agents against which immunity is to be conferred.

I. (Abschwachung method.) Pasteur's method can be universally employed: 1. Conferring immunity by means of weakened cultures of living bacteria. 2. By means of their toxins. The methods of weakening are: *a*. By high temperature. *b*. By low temperature. *c*. By chemic agents. *d*. Exposure to air or sunlight.

II. Verdunnung's method can only be applied in a limited number of cases; consists of employment of: 1. Virulent cultures. 2. Full-strength toxins.

III. Combinirte method can be universally employed; consists of conferring immunity by the employment of method No. I, and following this by the employment of virulent cultures and strong toxins, according to method No. II, thus conferring high degrees of immunity.

B. Conferring immunity by means of toxic agents of different character than those against which immunity is to be conferred. (Doubtful utility.)

C. Conferring immunity by means of direct employment of immunizing agents. (Blood serum therapy.)

SCHEME II.—MEANS BY WHICH IMMUNITY IS CONFERRED.

1. By destruction of the living bacteria causing the disease.
2. Checking the growth of the bacteria causing the disease.
3. Destroying the power of the bacteria to produce toxins.
4. The destruction of the toxins which the specific bacteria are producing.
5. Conferring such high powers of resistance upon the various organs and living cells of the body that they can withstand the nerve and cell poisons produced by the specific bacteria.

SCHEME III.—CAUSES FOR THE STATE OF IMMUNITY.

A. Passive resistance of the organism. (Theory of the barren soil.)

B. Functional peculiarity of the organism:

1. Functional activity of the living portion of the organism. (Theory of active resistance.) 2. Functional peculiarity of the lifeless parts of the organism, as the fluids or secretions of the body.

On account of the greater susceptibility of the guinea-pig to the toxins of trachoma, also on account of the very large quantities necessary to produce systemic effects in other animals, it was deemed best to produce the antitoxin by means of guinea-pigs.

Inasmuch as the production of antitoxins of the various other diplococci, such as gonococci and pneumococci, has not been crowned with any marked success, the experiment of producing a trachoma antitoxin was entered upon as much through scientific interest, as through hope of practical results.

An animal weighing 327 grams was chosen, and on December 1, the first dose of 1 c.c. of trachoma toxins was injected into the flank of the animal; the temperature rose to 103, and by the end of the fourth day gradually returned to normal.

During the four days the animal lost two grams in weight, which it regained at the end of two days. The next injection given was 1.25 c.c. and the dosage was gradually increased, the injections being given at intervals of from four to seven days, each injection being administered as soon as the animal had fully recovered from the preceding injection, care being taken to weigh the animal at intervals to see that it was not losing in body weight, as Behring has shown that animals which fall off in weight during the injection of toxins do not produce efficient antitoxins.

At the end of seven weeks the injection of 5 c.c. of the toxins was attended by a rise of temperature of only 1.5 degree, while a control animal injected with an equal amount died in less than twenty-four hours. The animal was now given several injections of pure bouillon cultures of the diplococcus, which were followed by only a very slight reaction; an injection of 5 c.c. of a ten-days-old culture causing a rise of temperature of only .75 degree. At the end of ten weeks, 1 c.c. of serum was drawn from a blister which had been produced on the abdomen of the animal, and injected into the peritoneal cavity of another guinea-pig, and at the same time 5 c.c. of the toxins were injected into the flank of this animal. The temperature rose to 105, a severe diarrhea set in and lasted several weeks, the respirations became very rapid, a profuse discharge occurred from the nose and eyes—whether due to a selective action of the toxins on the mucous membranes or not, I can not say. Gradually the symptoms abated and the animal recovered.

Inasmuch as the control animal recovered, after a dose which had previously proven fatal to similar animals, and inasmuch as the lethal dose no longer caused a rise of temperature in the animal which had been chosen for the production of antitoxin, it was now deemed sufficiently immune, and accordingly killed, the blood drawn off and allowed to clot in a cool place, and about one-half ounce of serum drawn off into a carefully sterilized wide-mouthed bottle, and 5 per cent. of carbolic acid was added.

The first patient on whom the antitoxin was used was Matilda S., aged 12 years, presenting a most pronounced form of trachoma, the palpebral conjunctiva of both eyes, as well as the retrotarsal folds, being studded with large gelatinous nodules. The cornea in both eyes was badly involved, that of the left especially so, extensive ulceration having been followed by anterior staphyloma.

Vision at the time of beginning the injections of antitoxin was R. E., shadows; L. E., fingers at about six inches.

The records of the case, at the Eye and Ear Infirmary, read as follows:

R. E.: Conjunctiva full of large follicles; slight entropion; large central leucoma; diffuse haze of cornea; marked pericorneal injection; R. vision = shadows.

L. E.: Numerous follicles; much cicatricial tissue; entropion; corneal bulging; dense leucomaat lower inner portion of cornea; pannus; left vision = fingers at six inches.

It was an exceptionally good case on which to try

the antitoxin, because the girl had never received any treatment whatever before coming to the infirmary. It was deemed best, for purposes of comparison, to try antitoxin on the right eye only, the usual methods of treatment, beginning with an energetic scarification of the conjunctiva, being employed in the left eye. One of the house surgeons of the Eye and Ear Infirmary had the left eye in charge; his treatment, after the scarification, consisted of applications of protargol and nitrate of silver to the conjunctiva.

The first application of antitoxin consisted of an injection of 1/3 c.c. into the upper retrotarsal fold. This was accomplished as follows: The everted lid was seized with a fixation forceps and raised by an assistant; a fold of mucous membrane in the retrotarsal fold was then picked up with a mouse-toothed forceps, into which the needle of a hypodermic syringe was inserted and the contents evacuated, forming a wheal which usually extended well along the base of the cartilage.

This injection was followed by redness, swelling and edema of the lids; cold applications were employed to reduce this reaction, and at the end of two days another injection of .2 c.c. was given. These injections were repeated at intervals of about three days and were given sometimes in the upper, sometimes in the lower, cul-de-sac. Usually each injection was followed by a reaction, which was allowed to subside thoroughly before the next one was given. After one week of this treatment the size and number of the trachoma nodules had visibly diminished. At the end of the second week the cornea showed marked signs of irritability, and photophobia, which had always been present, increased, so atropin was employed for a few days, which, together with hot applications, soon allayed the irritability. The injections were now resumed, but at longer intervals. At the end of the third week the large gelatinous follicles had almost entirely disappeared, and the right eye presented fully as much, if not more, progress than the left, which had in the meantime been treated along conventional lines. From the third week on, however, although the improvement continued, it was by no means so well-marked. It is true, the enlarged follicles all disappeared and the cornea became clearer, still some corneal haze and vascularity persisted; the lids showed some tendency to the formation of cicatricial tissue, and they by no means assumed the smooth yellow, glistening appearance characteristic of the normal lid.

What can be claimed for the antitoxin treatment in this case, however, is that it far surpassed the routine treatment; this perhaps is best shown by a record of the patient's vision, taken at intervals during treatment, which shows a far greater improvement in the eye treated with antitoxin than in the other eye. The following is copied from the house records of the case:

At time of entrance R. V. = shadows; L. V. = fingers at 6 inches.
February 2: R. V. = fingers 1.5 feet; L. V. = outlines.
February 13: R. V. = fingers at 5 feet; L. V. = fingers at 6 inches.
February 20: R. V. = $^{10}/_{200}$; L. V. = fingers at 1.5 feet.
February 25: R. V. = $^{8}/_{200}$; L. V. = fingers at 1 foot.
March 3: R. V. = $^{20}/_{200}$; L. V. = fingers at 1 foot.
March 13: R. V. = $^{20}/_{200}$; L. V. = fingers at 1 foot.
March 20: R. V. = $^{20}/_{100}$; L. V. = fingers at 1 foot.
April 15: V. R. E. = $^{20}/_{70}$.

While Matilda S. was receiving injections of antoxin, the remedy was also being tried on Sherman U., a farmer, aged 35, who presented a more chronic phase of the disease.

The man's condition on entering the infirmary, as described by the house records, was as follows:

R. V. = $^{20}/_{70}$; L. V. = $^{20}/_{200}$.
R. E.: Many small follicles scattered about conjunctiva; slight tendency to formation of cicatricial tissue, also entropion, beginning pannus, pericorneal injection.
L. E.: Many small follicles; cicatrization; entropion; corneal haze; beginning pannus.

This case was not considered as favorable as the other for the employment of antitoxin, and still it was tried in order that its result might be seen in the more chronic type of cases, this being the class with which the oculist more commonly comes in contact.

As in the other case, the right eye was selected for antitoxin treatment, while the left was given routine treatment by one of the house surgeons of the infirmary. Injections of $\frac{1}{3}$ c.c. were given, as in the other case, on an average of about twice a week. After each injection the reaction was held in check by the employment of cold applications.

The lid gradually became smoother, the follicles disappeared and the general condition of the eye was much improved, the vision advanced from 20/70 to 20/50; the improvement in the right eye, however, as measured by progress in vision, was not nearly as marked as in the left eye; for while vision in the right eye improved from 20/70 to 20/50, that in the left went from 20/200 to 20/70. After the antitoxin had been tried and found effective in these two cases the question arose: Is the improvement due to the specific action of the antitoxin, or might not the reaction caused by the injection of any neutral fluid under the conjunctiva have a beneficial effect on the course of the disease? Furthermore, it is well known that any neutral blood serum has more or less of a bactericidal action, so why might not the antitoxin serum have acted in this manner?

To settle these questions, 10 c.c. of antistreptococcus serum, prepared at the Pasteur Institute, were procured, and three drops injected in the upper, and three in the lower, cul-de-sac of Florence H., aged 10 years, who was suffering from a most pronounced form of trachoma, the entire conjunctiva of both upper and lower lids being studded with enlarged sago-like follicles.

A very strong reaction followed these injections, the lids became greatly swollen and edematous; the conjunctiva became chemotic; the reaction was allayed in a short time by the use of cold applications. The injection of antistreptococcus serum was continued for about three weeks and then abandoned because, though the injections caused strong reactions, it was found that they did not influence the course of the disease in the least, and that while the disease in the left eye yielded to ordinary forms of treatment that in the right showed no improvement whatever.

At the end of four weeks Sherman U. had progressed so much and felt so well that he was discharged at his own request. The lids showed a marked and equal improvement in both eyes, but the vision had improved far more in the left than in the right.

It is doubtful whether the antitoxin treatment held its own in this case. Matilda S. is still under observation and is receiving injections of antitoxin about once in every ten days. In her case the antitoxin treatment proved far more efficacious than the routine treatment.

RESULTS.

As can be readily seen, these experiments are of

more interest from a scientific than from a practical standpoint. They show quite clearly that the organism of trachoma produces specific toxins which cause local and systemic effects, and to whose action doubtless are due those disastrous local effects with which oculists are so familiar; they show that the body produces antidotes to these toxins, though the field invaded is so small that the systemic effects are not appreciable.

Has the trachoma antitoxin a practical application? That, from these few experiments can not be satisfactorily answered. The difficulty of obtaining the trachoma diplococcus in pure culture and the large quantity of toxins necessary to produce systemic effects in the larger animals, renders the production of antitoxin very difficult, still, when a more efficient antitoxin than that used in these experiments shall have been produced, far better results may be obtained and may well repay the difficulties encountered.

In the more chronic cases, where cicatrization has become well established, much can not be expected of the antitoxin, but in the early stage of the disease it certainly exhibits a specific and curative action.

Ill. Eye and Ear Infirmary.

Address.

THE MEDICAL PROFESSION.*

THE CAUSES OF ITS DIVISION INTO DISCORDANT ELEMENTS AND THE REASONS I AM NOT A HOMEOPATH.

BY WILLIAM E. QUINE, M.D.

PROFESSOR PRACTICE OF MEDICINE AND DEAN OF THE FACULTY, COLLEGE OF PHYSICIANS AND SURGEONS.

CHICAGO.

Charity suffereth long and is kind.

(Concluded from page 908).

Replying to the statements of Professor Hale, allow me to say: No, sir. I never attempted to make my hearers believe that avowed homeopaths of to-day follow the methods of Hahnemann; but I have attempted to prove a little less than you admit to be true, namely: That perhaps 1 per cent. of avowed homeopathists *are sincere* and consistent disciples of Hahnemann, the remaining 99 per cent. using the name "homeopath" merely as a catch-penny.

I have good reason to know that the newspaper is a favorite weapon of attack with other homeopathic gentlemen than the one alluded to, for there they can tell any story they like with a feeling of certainty that only a small number of readers will know whether it is true or false, and there they can deprecate the "intolerance" and "prejudice" and "persecution" of the "dominant school," and do it so artistically as to elicit generally, an editorial thunderbolt against that "school." But I have never in my life known a "disciple" who was willing to go before a jury of his peers and debate the doctrines of homeopathy as set forth by the founder of the sect. It is interesting to remember the opinion of Professor Hale: that there are less than twenty homeopathic physicians in existence who follow the methods of Hahnemann. But then, perhaps, Hahnemann did not know what real homeopathy was.

Constantine Hering, editor of one output of Hahnemann's "Organon," a man of such renown that a medical college in this city is named in his honor, an ultra homeopath ostensibly, whose numerous "provings" are ridiculed by Hempel, also a writer of renown, on account of their fantastic and shallow absurdities, says on page 4 of the preface of the book mentioned: "What important influence can it have whether a homeopath adopts the opinions of Hahnemann? I am generally considered a disciple and adherent of his, but I nevertheless declare that since my first acquaintance with homeopathy in 1821, down to the present day, I have never yet accepted a single theory in the "Organon." It is the genuine Hahnemannic spirit to disregard all theories when they conflict with the proper care of the sick."

Now, gentlemen, if you want more absolute and complete repudiation of homeopathy than this, you will have to look further, for I do not know any language that will express it. And yet I have been invited to come here by friends who, a year ago were honored professors in the Hering Medical College of this city, and are now professors in the Dunham Medical College, and tell them and you why I am not a homeopath! I am not a homeopath, gentlemen, because I can not call myself "a disciple and adherent" of Hahnemann in one breath and repudiate every one of his precepts in the next. Ability of that kind is not given to every man, you know; and with humility and respect I ask your indulgence for my own defects of organization.

The *Northwestern Journal of Homeopathy* says: "The practitioners of homeopathy forty years ago who are now living can scarcely recognize the merchantable article called homeopathy at the present day."

Dr. Wilde, vice-president of the British Homeopathic Society, writes in the London *Lancet* for 1877, as follows: "1. It is true that the views of Hahnemann are often extreme and incorrect. 2. That Hippocrates was right when he said that some diseases can be treated best by contraries and some by similars; therefore it is unwise and incorrect to use the title of homeopath. 3. That although many believe that the action of the infinitesimal in nature can be demonstrated, its use in medicine is practically, by a large number in this country, all but abandoned."

In view of the foregoing quotations and extracts—and did time permit I should cite three times as many, and all from representative authorities—can it be claimed by any man that homeopathy now has any creed at all? Is there *one* Hahnemannic precept upon which all disciples are united? There is nothing left for them to unite upon but the name "Homeopath"; but as long as that name has commercial value it seems to me highly probable that the medical profession will continue to be divided into discordant elements.

The present status of homeopathy is well set forth by the editor of the *Medical Century*, in the number for Oct. 15, 1895. This gentleman, Prof. C. E. Fisher, is an author of repute and at the present time is president of the American Institute of Homeopathy—the largest organization of homeopathists, I believe, in the world. No one is in position to speak with greater authority than he. Under the caption, "Whither are we Drifting," he writes as follows: "Drifting, drifting, drifting. Who's drifting, and whither? Why, we, the homeopathic profession of

*An address delivered before the faculty and students of the Dunham Medical College (Homeopathic).

this country are drifting and who knows where? Have the readers of this journal attended the medical meetings lately? Have they read the journals recently? Have they talked with their colleagues on the street-corners or in the Club lately? And if so, have they seen, heard or read much, if anything, about homeopathy—the homeopathy of Hahnemann, for instance? Is it not true that supposed new treatments, new remedies, new fads, and new fancies occupy altogether too much of the time in medical gatherings, in the journals, and in our conversation with each other? We believe we will not be deemed pessimistic when we aver that such is only too true.

"Is homeopathy a science? Then, why not stick to the text? Is '*similia similibus curantur*' a law? Then why not follow it? What need for antitoxins, palliatives—from whatever source—and proprietary remedies of whose formula we know nothing and, unfortunately, seem to care less?

"How often we hear the remark, 'I believe fully in homeopathy, but I am so broad-minded that I do not hesitate to take in all the good things that are offered me, no matter what their source.' This sounds amazing well, but if the thought be followed to its logic conclusion, what need will there be for a separate system of medicine, for the homeopathic profession and all those appurtenances that go to make it a formidable rival of the antipathic system? What need for a law indeed, that is only in part a law—a law that fails so often, if, indeed, it does fail, which we emphatically deny, that we have to grope about in the dark, as it were, without the light of science to guide us, following our vocation with the crudities and empiric methods of the drug clerk, the proprietary prescriptionist, and the omnibus dosist of the present day? Go to, with the vainglorious boast that you are 'too broad-minded' to adopt a dogma, a creed, a rule. A law is never a dogma. No mariner would attempt to guide his vessel into port by guess-work, or analogous reasoning as to which way his course should lie and what his relation to shore, and surely the medical mariner who essays to guide the human vessel into port from the troublous sea of typhoid fever, pneumonia, diphtheria, or other serious disorder, should not attempt this task without a chart and rudder to guide him and afford him complete control of his precious cargo as he tries to tide it through the storm of disease and into its harbor of recovery.

"If Hahnemann enunciated a law, and we believe it to be a law, we should prescribe according to that law. How many of us do so in other than the most careless and haphazard fashion? If we are to believe what we read and believe what we hear at the average medical convention, not one member of our profession out of a dozen knows what scientific, careful, accurate, '*similia similibus curantur*' prescribing really is. Something is wrong, and we are simply drifting, drifting, drifting, no one knows where."

My learned friend who thinks well of *Lac Caninum* as a remedy for diphtheria is doubtless correct as to the general proposition; but he is in error as to one point. Somebody does know "where." At least, if he does not know "where," he does know "whence." It is the editor of the *Medical Century*. This gentleman, in the number of his publication dated March, 1892, says:

"We venture to assert that had not our school drifted away from the practice of forty years ago it would have been dead and buried long since.

"We have drifted away from the practice of giving a pellet of the two-hundredth or higher, and waiting thirty or sixty days for its curative effects; from the prescribing a high dilution by smelling the dry pellets, those same pellets 'grafted' by shaking a thousand pure pellets with one, medicated by the the thousandth.

"We have drifted away from a belief in 'provings' made by taking a single dose of the one-thousandth, thirtieth or third even, and then recording all the symptoms felt by the prover—natural symptoms, cold, diarrhea, etc.—for the next thirty or sixty days!

"We have drifted away from carrying a pocket repertory to the bedside of the patient, and recording the symptoms in columns, and a weary search in said repertory until a mechanic similimum was found.

"We have drifted away from the days when our pseudo-surgery was a disgraceful farce, when we expected *silica* to open a felon or *hepar sulphur* to lance an abscess.

"We have drifted away from the narration of miraculous cures with the highest attenuations, which were not cures at all, but a spontaneous finale of a self-limited disease.

"We have drifted away from the days when our practitioners would sit by the bedside of a woman dying of uterine hemorrhage, hunting in a repertory for the 'indicated remedy,' while the vital fluid was ebbing away, without resource to the tampon or ergot."

That homeopathy is "drifting" then, seems to be a fact; and it is a pity that "no one knows where."

I trust, gentlemen, it has been made plain that the homeopathy of to-day is very different from the homeopathy of forty years ago, and that the "Causes of Division of the Medical Profession into Discordant Elements" are not as obtrusive as they were. I also trust that I shall give no offense in saying that what your writers term "drifting," a non-partisan writer might term "disintegration." The trend of evolution seems to be unmistakable. Can you doubt it when you are listening to essays at meetings of your State and National organizations on "How can We Best Advance Homeopathy?" "The Causes of Divisions in Our Ranks," and other suggestive topics? Things are not as they were. If there is any reason now except lack of outspoken honesty on the part of homeopathists why the name "homeopath" should be retained or why the medical profession should continue to be divided into discordant elements, I should be glad to learn what it is. I fully believe that homeopathists as a class still attach greater importance to the conception of "similars" than the other physicians do; and I also believe that there are a few, very few, sincere Hahnemannic homeopathists still in existence. Professor Fisher estimates, by implication, the number at less than one-twelfth of the entire number of those who bear the name. Professor Hale estimates the ratio of true to spurious at less than one to one hundred; and he also implies that the total number of homeopathists "in this and the old countries" is only two thousand. Hence, according to his figures, there are less than twenty honest and consistent Hahnemannic homeopathists in existence to-day. And if he underestimates the total number, and this should prove to be four thousand instead of two thousand; even then there would be less than forty genuine Hahnemannians on the face of the earth. I am well aware that Wesselhoeft places the total number of alleged disciples at six thousand, and

that the late president of the Illinois State Homeopathic Society, Dr. A. A. Whipple, declares there are fifteen hundred registered in Illinois alone. No, you are in error, gentlemen. There are four thousand avowed homeopathists in the world, one thousand and forty-six of whom are registered in this State, and more than eight hundred of these are located in Cook County. Think of it! One-fifth of all the homeopathists in existence, and one-fourth of all the homeopathic colleges, are located in Chicago and its suburbs—and yet Chicago is the wickedest city in the world! Of these only about seventy, as implied by Professor Fisher, and only about eight, according to Professor Hale, are honest. And yet I am asked why I am not a homeopath!

At the meeting of the American Institute of Homeopathy, in 1880, a movement was inaugurated by gentlemen of this class to prevent the complete extermination of true homeopathy; and, accordingly the "International Hahnemannian Association" was organized and the following "platform" of principles adopted:

WHEREAS, We believe the Organon of the Healing Art as promulgated by Samuel Hahnemann to be the only reliable guide in therapeutics; and

WHEREAS, This clearly teaches that homeopathy consists in the law of similars, the totality of symptoms, the single remedy, the minimum dose of the dynamized drug, and these not singly, but collectively; and

WHEREAS, Numbers of professed homeopaths not only violate these tenets but largely repudiate them; and

WHEREAS, An effort has been made on the part of such physicians to unite the homeopathic with the allopathic school; therefore

Resolved, That the time has fully come when legitimate Hahnemannian homeopaths should publicly disavow all such innovations;

Resolved, That the mixture or alternating of two or more medicines is regarded as non-homeopathic;

Resolved, That in non-surgical cases we disapprove of medicated topical applications and mechanical appliances as being also non-homeopathic;

Resolved, That as the "best dose of medicine is ever the smallest," we can not recognize as being homeopathic such treatment as suppresses symptoms by the toxic action of the drug;

Resolved, That we have no sympathy in common with those physicians who would engraft on homeopathy the crude ideas and doses of allopathy or eclecticism, and we do not hold ourselves responsible for their fatal errors in theory and failures in practice;

Resolved, That as some self-styled homeopathists have taken occasion to traduce Hahnemann as a "fanatic," as "dishonest" and "visionary," and his teaching as "not being the standard of homeopathy of to-day," we regard all such as recreant to the best interests of homeopathy;

Resolved, That for the purpose of promoting these sentiments, and for our own mutual improvement, we organize ourselves into an International Association, and adopt a Constitution and By-Laws."

Every fair-minded man, I take it, respects sincerity in others, no matter how widely he differs from them in opinion. I honor any man who will stand for his convictions and will not yield—will *not* yield—no matter how great the odds against him, as long as he believes the conviction represents a fact. But the professed homeopath who jeers at that man for holding true to the precepts of Hahnemann, and at the same time puts the slur of "old-school doctor" upon me for not accepting those precepts, is, in my view, merely a bird of prey that befouls both sides and plunders both. Let me give you another estimate of the relative number of such men in the homeopathic ranks.

Dr. James Bell, president of the International Hahnemannian Association, for 1892, says: "Our society numbers in active living members about 150, and it would be a generous estimate, I think, to double that number as representing in the whole world all those who may be called true Hahnemannians or are becoming such. If we have patients going to other cities, especially in the West and South, how rarely can we recommend a physician to them; and if the patients are going to Europe we know of but five or six men in the great cities to whom we can safely trust them."

In view of these various estimates made by eminent members of your own school as to the relative number of genuine and sham homeopaths, would it be impertinent for me to inquire what kind of homeopaths you are, gentlemen, and what kind you had in mind when you asked me to tell you why I am not one?

I honor the character of a true, consistent Hahnemannian. I may secretly think that he has "a wheel in his head," but I can not help admiring the sincerity and courage with which he does battle for what he believes to be the truth. I consider that man my equal in every way, except as to good sense. He is welcome to my fireside and to my table. I salute him as an honest man, and bid him God-speed.

But, as to the sham homeopath who merely uses the name as a trademark—excuse me. Young gentlemen, be honest; or, if you are not made that way, be lawyers. I trust it has been made clear that I do not regard all homeopaths with unfriendly eye. There are different kinds of "disciples," you know. St. John was one kind, and the disciple who liked silver was another. According to Professor Hale, less than 1 per cent. of Hahnemann's disciples are of the same class as St. John, and more than 99 per cent. belong to the other class.

Now, do not imagine I am here to claim that all "regulars" are angels of light, or that all homeopaths are fiends of darkness, for I am a "regular" myself, and I don't want to be an angel. And I know, and you know, that men are merely men, however they may be labeled, and that the very best of them have much need of indulgence and forbearance on the part of their fellows. I know, and you know, that a man can be a very regular doctor, and at the same time a regular ignoramus, a regular vulgarian, a regular drunk-a regular blackguard. I know, and you know, that that a man may call himself "homeopath," and yet be a broad-gauged, learned and successful physician, an honored citizen and a loyal friend. His library may be well stocked with standard "old-school" text-books, and his mind may be well stored with their contents. He may have spent years in Europe, perhaps, under the personal instruction of "old-school" teachers. He may have been well trained by these teachers in the use of all instruments of precision employed in the diagnosis and treatment of disease, and his judgment may be well trained, also, by studious observation in the wards of the great European hospitals, and in their inevitable attachments, the houses of the dead. He is ostensibly a homeopath. His patrons, with good reason, are devoted to him, and without good reason are deceived into being ardent supporters of homeopathy—these same patrons having no conception whatever of what the genuine article really is. He is a doctor of superior merit, and his admiring patrons begin to dream of making their sons just that kind of doctor, or, may be, the sons decide it for themselves. Thus homeopathy is being kept alive—the name—that is all. It has no standard creed upon

which all its avowed adherents are agreed. The dictum that symptomatic treatment is all-sufficient for purposes of cure; the prohibition of local treatment for local diseases; the conception that a spirit-like power is imparted to medicinal and inert substances by processes of attenuation and trituration, and that this power is progressively increased by the progressive diminution of the amount of matter required for its production; the peculiar notions about "grafting" and olfaction; the limitation of the physician to the use of one single, simple medicine at a time; the fantastic "provings" and "cures" wrought by high potencies; the peculiar notions of pathology inculcated by Hahnemann; the doctrine that the "law of similars" is an "infallible" and "universal" and the "only law of cure," all these have been repudiated by the professed disciples of the "Master." Name one of the Hahnemannic precepts and I will name twenty disciples, representative men—leaders—who have repudiated it. The law of similars is just where father Hippocrates left it. There is no more difference of opinion between representative "new-school" and "old-school" physicians in relation to this question to-day than exists between individual adherents of either school concerning the germ theory of disease.

And what does the difference relate to, anyway? A mere theory of the mode of action of medicines in curing disease. That is all. Think of it! A theory—speculation—wind! A mere difference of opinion as to the *way* medicines produce their curative effects, is, in the year of our Lord 1899, and in free America, the ostensible reason why a profession that is called "liberal" should be divided into discordant elements! Oh, what a shame upon us all! What a shame!

Read the Code of Ethics of the American Institute of Homeopathy, and let the principles therein set forth sink deep into your hearts and take root. I find in this noble instrument the words: "Perfect freedom of opinion and practice is the unquestionable prerogative of the practitioner who is the sole judge of what is the best mode of treatment in each case of sickness entrusted to his care. No greater misfortune can befall the medical profession than the action of an influential association establishing a creed or standard of orthodoxy." Read it again. Do you think it is said in sincerity, or is it a sham show of liberality? Reflect on it. A sect founded on creed, estranged from the great body of the profession, and keeping up the estrangement still, on account of creed, whose colleges are established to maintain the creed, whose publications spit venom at those who do not accept the creed, whose societies are wrangling, and whose freshman students even are chattering about creed, through its national organization, declares that it has no creed nor any standard of orthodoxy. What is left of homeopathy? What is there to prevent me—should I desire it—from joining the "American Institute" to-morrow, and without changing my present views and methods of practice in any particular, being a good enough homeopath to meet the requirements of that organization? What is left of homeopathy? Answer each to his own conscience. "The name." And why is the *name* retained when every precept it stands for has been cast aside? Answer each to his own conscience.

Have you read the history of medicine to no purpose? Do you not know that this history is marked by the appearance and disappearance of sects, and schools, and systems, and that little excrescences appear upon the great body of the profession every now and then? Where is the dogmatic sect? Where is the empiric sect? Where is the methodic sect? Where is the mathematic sect? Where is the chemic school? Where is the Brunonian system? They have come and gone. Each has contributed something, perhaps, to the evolution of therapeutics, and having served its purpose has passed away. Now, contemplate the history of homeopathy—the progressive repudiation of one tenet after another until there is not left a single one to serve as a standard of orthodoxy. Can you not read the writing on the wall? Homeopathy has don a noble work; it has served its purpose well. Look back a hundred years to the time of its birth and contrast the methods of practice then in vogue with those which are in favor to-day, and tell me whether a stupendous revolution has not been wrought, and largely through the instrumentality of Samuel Hahnemann. Then the practice of medicine, as it appears to us now, was almost senseless savagery. Bleeding, bleeding, bleeding, for everything. Blistering, purging, vomiting, salivating the sick to death. Doctors were fined and imprisoned in those days for allowing a sick man to die without bleeding him. Brissot is said to have been driven from Paris, not because he ever failed to bleed a patient, not because he questioned the universal applicability of the lancet, but because he had the audacity to propose a new method of bleeding. The traditions of Hippocrates and Galen had to be duly honored in those days. It is related of Achilles that when sick he consulted the oracle and was informed that he must lose thirty pints of blood and then be plunged into the icy waters of the river! But Achilles made a dive for the back door and, with electricity in his heels, struck out for his life and never looked back till he reached the Plains of Troy. I can imagine him now endorsing with undisguised enthusiasm the sentiment of Chimmie Fadden—"To 'ell with the doctors!"

Look at the prescriptions of those times and you will find that many of them include from ten to sixty ingredients. Ask my own students whether they would rather be bled, blistered, puked, purged, and salivated, and then be compelled to swallow a pint of some decoction every two hours till dead, or take their chances with calcarea carbonica, high?

Hahnemann banished the lancet. Imagine the storm of indignation and abuse that assailed him when he questioned the infallibility of Galen and inveighed against bloodletting! Was he not a man of courage? He banished the lancet. He demonstrated that the sick could get well without any medicine at all. By withholding medicines and entertaining himself and his patients with high potencies he promoted, unwittingly it is true, the study of the natural history of diseases. He gave an impetus to, if he did not originate, the systematic study of the physiologic action of medicines. Assuredly, his so-called "provings" are little better than idiotic gibberish, but the underlying idea that led to these observations is recognized to-day as scientific. He compelled men to think. He assisted them to the discovery that active medicines are never neutral forces, but forces which do something, either good or harm. He taught prudence and accuracy in the use of these two-edged weapons—the prudence of small doses and the accuracy which belongs to simplicity in prescriptions. He gave a powerful impetus to pharmacy. His potencies were so easily swallowed, and still more easily smelled,

that physicians were compelled to exert themselves to devise more eligible preparations of real medicines for administration to the sick; but notwithstanding the progress that has been made in this direction, it must be admitted that there is yet room for much improvement. Who has done more than this—who has done as much—for rational therapeutics? His conception of "potentization," fantastic and irrational as it was, and now repudiated by an overwhelming majority of his professed followers, as it is, and laughed at by "old-school doctors," as it always has been, has nevertheless proved a lever of resistless power.

Hahnemann came to the front in the very nick of time—or perhaps the times drove him to the front. All Europe was in an uproar when he was elaborating his peculiar doctrines. The French Revolution occurred in 1793, when he was 38. Napoleon began his Italian campaign in 1795, his Egyptian campaign in 1798, and crossed the Alps in 1800 to win his victory of Marengo. In 1805 the battle of Austerlitz was fought and in 1812, the year of America's second war with England, the cry of "On to Moscow!" reverberated throughout the continent of Europe. The whole civilized world was in agony. Those were times that stirred the souls of men. Soldiers and statesmen made history out of the blood and anguish of their fellows. Every mind was active. The very air was instinct with strange conceptions and destructive energies. Homeopathy was born. If Hahnemann had not been there do you doubt that somebody would have come forth and led a revolt against the existing methods of practice? Do you doubt that this new authority would have gone in the same direction as Hahnemann did and made himself sponsor for many errors and absurdities such as were included in the Hahnemannic system? But in spite of his absurdities; in spite of his rancorous abuse; in spite of his venomous falsehoods, he made men think. Some accepted his views in their entirety and called themselves homeopaths, and they have been busy ever since repudiating his errors or trying to convince themselves that these errors are true. The majority of physicians, while they fell away from the injurious and violent methods of practice formerly in vogue, were unable to accept the fantastic substitute which Hahnemann offered. They started anew and by studying the operation of medicines on man and on lower animals, in health and disease, not by the puerile process of noting and recording fleeting thoughts and sensations and fictitious symptoms, but by the arduous process of demonstration by means of electric, microscopic, chemic, and other agencies of precision, they are gradually acquiring accurate knowledge of the powers and limitations of the materia medica. They do not claim to have a finished system of therapeutics which enables them to cure diseases according to rules. They do not claim to have any infallible "law of cure," and they look askance at those who do. They are not "pathists" of any kind, and they repudiate and denounce the efforts of the "new school" to fix upon them a sectarian name. They neither uphold any particular method of cure, nor exclude any method of cure, whether "homeopathic," "allopathic," or "antipathic." They have no therapeutic creed. They remove the causes of disease when they can, and when they can not, they try to neutralize or counteract the effects. Whether medicines act by virtue of similarity or by virtue of dissimilarity they do not care a straw. They endeavor to guard against complications and to facilitate the evolution of the natural history of diseases. They search for and remove pathologic products. They endeavor to repair the damage that disease has done. Each is free to practice medicine in any way his conscience and his judgment approve, subject, of course, to the laws of the land. They are broad enough to invite the companionship of every honest physician. If you believe in the use of similars, all right. Come in! If you believe in the use of "dissimilars," all right. Come in! If you believe in potency and grafting, all right. Come in! If you don't believe in them, all right. Come in! Nobody cares a cent what you believe. These are questions to be decided each man for himself. For each man is free and beholden to no master. Each is the administrator of his own mind, the custodian of his own conscience, the architect of his own reputation, the lord of his own destiny.

The attitude of the "regular" profession toward homeopathy, as shown by the "Code of Ethics" of its national organization—the AMERICAN MEDICAL ASSOCIATION—is not as well understood as it deserves to be. It is boldly stated by some, and believed by many, that "old-school" doctors are prohibited by this Code from professional affiliation with their brethren of the "new school" on account of differences in doctrine, but this is not true. The Code does say that no one can be considered "a fit associate in consultation whose practice is based upon an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology and organic chemistry." But is there such a homeopath in existence? Is there *one* whose practice is based on an exclusive dogma, to the rejection of the aids furnished by anatomy, physiology, pathology and chemistry? There is not one. So far as I know, these subjects are as well taught in homeopathic colleges as in others, and from exactly the same books—books written by old-school doctors, and with the aid of microscopes devised by old-school doctors No homeopath will stand before this audience and say that the physicians of his "school" are behind their "old-school" brethren in respect to their acquaintance with these subjects and their readiness and ability to utilize them in the diagnosis and management of disease. There is no reason in the "Code of Ethics" of the AMERICAN MEDICAL ASSOCIATION, then, why the medical profession should be divided into discordant elements. If this statement is not thought to be well supported by facts, permit me to strengthen it by quoting a preamble and resolution adopted by the ASSOCIATION in 1892:

> WHEREAS, Persistent misrepresentations have been made, and are being made, concerning certain provisions of the Code of Ethics of this ASSOCIATION, by which many in the community, and some even in the ranks of the profession, are led to believe those provisions exclude persons from professional recognition simply because of differences of opinions and doctrines, therefore,
>
> *Resolved*, That clause first of Article iv, in the National Code of Medical Ethics is not to be interpreted as excluding from professional fellowship, on the ground of difference in doctrine or belief, those who in other respects are entitled to be members of the regular medical profession. Neither is there any other article or clause of the said Code of Ethics that interferes with the exercise of the most perfect liberty of individual opinion and practice.

Hence, you may hold any opinion you like on any subject, and if you are a respectable man—and it

isn't necessary to be terribly respectable either—you are eligible for membership in that organization. Examine these ethical rules side by side with those of the American Institute of Homeopathy and what difference do you find? None, absolutely none.

Why, then, does the medical profession continue to be divided into discordant elements? Ah! Because my friends of the "new school" will not give up their sectarian name. That is all. Some of them bear it honorably and loyally, believing in all sincerity that it stands for great facts; but they are very few in number, and getting fewer every year. Your national organization refuses to recognize *any* standard of orthodoxy. Belief in not *one* of Hahnemann's precepts is necessary to membership in that organization. Why, then, do they retain the name homeopath? Because it has commercial value. This value, probably, originated in the fact that more people survived disease under treatment by calcarea carbonica, high, than recovered after losing half a gallon of blood; and it is now maintained by giving credit to homeopathy for cures wrought by non-homeopathic measures. Homeopathy has its colleges and other property interests, which will not be allowed to go to pieces if it can be prevented. Political maneuvering, to get the Nation and the State to take this sect under its protecting and supporting wing, may be tried, as it has been tried. No effort will be spared to save the name. The books and periodicals and the teachers of homeopathy are doing the best they can to *prevent* unification of the profession; and this is *the* most powerful cause in operation to-day of "Division of the Medical Profession into Discordant Elements."

I freely admit, however, that the blindness of bigotry and irreconcilable anger on my side of the discord—lack of generosity, lack of everything that characterizes a Christian spirit has been, and is now, of great assistance to my homeopathic friends in keeping us apart. But my voice, small as it is; my vote, insignificant as it is; my influence, weak as it is—these are pledged to promote the unification of our beloved profession, which may easily be accomplished by a little forgetting and forgiving on both sides, and by an honest purpose on both sides to give play to the proposition that "Charity suffereth long and is kind"

Then let us pray that come it may,
As come it will for a' that,
When truth and worth o'er a' the earth
Will bear the gree and a' that.
And a' that, and a' that,
It's coming yet for a' that,
When man to man the warld o'er
Will brithers be and a' that.

CATARRHAL LARYNGITIS.*

BY HENRY R. SLACK, PH.M., M.D.

Professor Chemistry and Physiology, Southern Female College; Secretary Georgia State Board of Pharmacy; Member American Medical Association, etc.

LA GRANGE, GA.

Fortunate indeed are the parents who have reared children, and are unacquainted with croup. Few diseases of childhood produce such distressing and alarming symptoms, and at the same time are so seldom fatal, as spasmodic croup.

I venture the assertion that nearly all have time and again had the following experience: shortly after midnight we are aroused from our pleasant slumbers by the violent ringing of the door-bell; and, on answering it, we find a half-dressed, badly frightened father. "Hurry, Doctor! My child has the croup, and I fear he will be dead before you can reach him—hurry!"

We in a few minutes reach the bedside, where all is consternation and confusion. The little four-year-old is on the mother's lap, breathing heavily, face congested and voice husky, with an occasional croupy cough that sends terror to the parents' hearts. The grandmother is busy mixing alum and honey, vinegar, salt and pepper, or dosing the poor little sufferer with syrup of ipecac, squills, etc., until, as Dr. Osler says, "Too often the poor child, deluged with drugs, is longer in recovering from the treatment than he would be from the disease." Finally, the little fellow begins to vomit freely, is bathed in a profuse perspiration, and so generally relaxed and deranged that it takes him days to recover.

It is with the hope of alleviating some of this suffering that I now submit the following prescription, which was suggested to me by Dr. Joseph Holt of New Orleans, and I have tried it many times with the happiest results:

℞.	Chloralis	gr. lxxv	5
	Potassii bromidi	gr. xlv	3
	Ammonii bromidi	gr. xxx	2
	Aquæ cinnamonii	ad. ℥ii	62

M. Sig. Teaspoonful, and repeat in twenty minutes, if not relieved.

This is intended for a child about 5 years old. For younger children I diminish the dose slightly, though I find children bear chloral nicely in doses altogether out of proportion to their ages.

This prescription exactly meets the indications. The chloral relieves the spasm of the larynx; and the bromids allay the nervousness, so that the little patient is soon asleep, and awakes the next morning as well as usual, with little danger of an attack the next night. The first dose generally gives relief, and I have never failed to secure it with the second.

This prescription is of no benefit in true or membranous croup, and then we must promptly use diphtheria antitoxin, which has reduced the mortality of this dread disease from over 50 to about 13 per cent., and is justly classed as one of the greatest medical discoveries of the nineteenth century.

*Read before the Medical Association of Georgia, Macon, April 20, 1899.

Dilatation of the Colon.—J. P. Crozer Griffith, in his paper on "Congenital Idiopathic Dilatation of the Colon," before the Association of American Physicians, Washington, D. C., May 2–4, classed dilatation of the colon as: 1. An acquired dilatation, oftenest the result of chronic constipation. 2. A congenital dilatation dependent on some form of stenosis. 3. A congenital idiopathic dilatation, i. e., not dependent on any discoverable organic cause. Since there is considerable difference among writers regarding the selection of reported cases of idiopathic dilatation, the author has reviewed all the public cases as far as known to him, and gave a synopsis of them in brief, putting in this list, however, only those which seemed to have some reasonable claim to be regarded as belonging to the category of congenital idiopathic dilatation. In a secondary list he mentioned other cases which ought to be excluded, and gave the reasons for this exclusion. He reported a case which came under his own observation, in detail, analyzing the symptoms of this and of the cases of the first list mentioned, he reviewed the symptomatology, diagnosis and treatment of the disease.

Correspondence.

The Serumtherapy for Syphilis.

BRESLAU, April 8, 1899.

To the Editor:—An interpellation was recently brought up in the German Parliament against Professor Neisser of Breslau, and against the manner in which he is experimenting with "antisyphilitic serum." This gentleman has again attracted the attention of the medical world; physicians, however, are divided in regard to the advisability of his aggressive type of research. Non-medical men, however, on the other hand, are irritated and criticise Dr. Neisser severely, hoping at the same time that just punishment will be the consequence of his great thirst for knowledge. To show the weakness of the layman's position, and to clear up to a large extent misunderstood facts, is the purpose of this discussion.

The controversy began after the publication of Dr. Neisser's paper, entitled "Was wissen wir von einer Serumtherapie bei Syphilis and was haben wir davon zu hoffen?"[1] The author recapitulates all investigations, clinical and otherwise, which have been made in regard to this topic. He speaks of the trials to cure syphilitic patients by injections of serum taken from other syphilitic sufferers. Chapter vi of the article treats of the possibility of producing immunity in nursing babies, in order to protect them against syphilitic mothers; the thought, however, of immunizing all people against the disease is discussed as of equal importance.

Prof. Neisser is the director of the university clinic for skin and venereal diseases at Breslau, and has ample material for experimentation at his disposal. The following eight cases have given rise to the attack upon this eminent man:

Case 1.—Clara G., 14 years of age, with psoriasis, from Feb. 2 to 6, 1892, received three injections of 4 c.c. each, with no reaction. Died eight months after treatment.

Case 2.—Clara J., 10 years of age, with scrofuloderma, from Feb. 6 to May 4, 1892, received injections of 5 c.c. each, subcutaneously, and has not shown syphilis for four years since treatment.

Case 3.—Valeska M., 16 years of age, with psoriasis, July 1, 1892, received 4 c.c. subcutaneously; temperature 38 C. The patient has not shown syphilis for more than four years since treatment.

Case 4.—Martha W., 24 years of age, with gonorrhea; received 4 c.c. subcutaneously, April 29, 1892. Observed for two years after treatment. No symptoms of syphilis appeared.

Case 5.—Marie P., 20 years of age, received 4 c.c., subcutaneously, from a patient with papular ulcerations April 29, 1892, and showed symptoms of syphilis in December, 1895.

Case 6.—Bl. P., 17 years of age, with ulcus molle, bubo inguinalis, on April 29, 1892, received 100 c.c. intravenously. Gonorrhœa became syphilitic April 14, 1893.

Case 7.—Anna Ch., 19 years of age, with ulcus molle, bubo inguinalis, May 6, 1892, received 30 c.c. intravenously, and May 10, 1892, 10 c.c. intravenously. Became syphilitic June 3, 1892.

Case 8.—Emilie N., 17 years of age, with gonorrhea, Feb. 15, 1892, received 30 c.c. intravenously; July 7, 1892, ulcus, August 24, papulæ ad genitalia et plaques ad tonsillum.

In all these eight cases a more or less large quantity of serum, taken from early and late syphilitic patients was injected. As half of the persons became afflicted with the disease, in spite of the serum treatment, a positive result can not be claimed for Dr. Neisser's investigation. The research has been carried on with a therapeutic end in view and not merely for the purpose of solving a theoretic question. It is simply another of those serum treatments which promise so well for humanity. As we know that blood has acted infectiously, it seems a risky matter to inject serum from syphilitic persons into a healthy circulation. From other bacterial diseases and even from experiments on syphilitic patients we know that serum free from cells is not dangerous as a carrier of infection. Dr. Neisser prepared the serum according to our latest methods, being, moreover, careful to allow the fluid to stand until a sufficient time had elapsed for the solid particles to settle. Centrifugation would have furnished a more certain way for making the serum free of cellular material. The question, whether the serum infected those last four persons, can be negatively answered.

All the eight persons were prostitutes, and as far more than 90 per cent. of this class of people acquire syphilis, a new possibility arises, namely, the persons in question may have acquired the disease before or after the injections were made. In woman it is often a difficult matter to diagnose primary lesions of syphilis. From the period of incubation we can gather no decisive facts, as great possibilities in time exist between primary lesions of syphilis and an intravenous injection of the poisonous matter. In the latter case we might expect tertiary symptoms much sooner; this conjecture, however, is not verified by Dr. Neisser's experiment.

Professor Neisser seemingly wrote the article in question rather hastily, failing to make concise statements which are secure against adverse criticism. He would have done better perhaps by leaving his results unprinted, or by following the example of those many men who have published much more dangerous work under assumed names.

Shortly after Dr. Neisser was so severely criticised by the newspapers, he sent a satisfactory report regarding the matter to the university authorities. At present he is quietly waiting for any possible reprimand from the ministerium before he will see fit to defend himself properly. The gentleman who attacked Dr. Neisser in Parliament, is entirely misinformed when he speaks of eight innocent little children being experimented on in a manner which places the cruelties of vivisection in the shade. Only, if his statement is correct, are we justified in claiming, with him, punishment for Dr. Neisser for the sake of clean and honorable methods of investigation.

RUSSELL BURTON-OPITZ, M.D.

[1] Archiv. für Derm. und Syphilis, B. 43 u. 144; ii, 434.

Beer Drinking in the Army.

To the Editor:—Through the energy and activity of certain temperance lobbyists, the army bill, approved March 2, 1899, contained certain provisions which were intended to prohibit the sale of intoxicating liquors to United States soldiers in their camps and garrisons. The wording of the enactment was:

That no officer or private soldier shall be detailed to sell intoxicating drinks, as a bartender or otherwise, in any post exchange or canteen, nor shall any other person be required or allowed to sell such liquors in any encampment or fort or on any premises used for military purposes by the United States; and the Secretary of War is hereby directed to issue such general order as may be necessary to carry the provisions of this section into full force and effect.

So generally was the intent of the enactment understood that army officers at first accepted this legislation in the spirit in which it was framed; but they regarded it as a serious blow to the cause of temperance in the army. These officers for a dozen years have been fostering the organization of a post exchange at every military post. The exchange is an establishment in which the soldier may purchase at a reasonable price all the articles for which he usually spends his pay. Under war department orders an officer takes charge of the business of the exchange, and enlisted men are authorized to be detailed as salesmen. The profits are distributed pro rata to the various commands constituting the garrison, to be used as company funds for the improvement of the diet of the men. Among the articles authorized to be sold at the exchange were "beer or light wines by the drink." The propriety of this authorization was at first questioned by many officers, medical officers included. The argument was made that old soldiers habituated to the use of distilled liquors would not be

satisfied with beer, but would get whisky at other places than the exchange, while young men who would not leave their barracks for intoxicants of any kind would be led into bad habits by the ease with which beer was to be had and the official sanction given to its use. But the experience of the past ten years has proved the wisdom of those who labored so earnestly to establish the exchange. From the statistics of the surgeon general's reports, we find that the average annual number of admissions for alcoholism and its direct results among the white troops during the ten years, 1878–1887, was 64.28 per thousand of strength. This rate diminished during the next ten years, 1888–1897, in proportion as exchanges were established at the various posts, as follows, omitting fractions: 44, 46, 44, 44, 41, 37, 34, 32, 31, 30. In 1890 there were seventeen posts at which the rate exceeded 10 per cent. of the strength; in 1891 eleven, and in the following years, to and including 1897, ten, seven, four, five, two and two. Taking Willet's Point, N. Y., as a single illustration: This post in 1889 had an admission rate for alcoholism of 222.97 per thousand men; in 1890, when the exchange was established, 157.50, and next year only 70.46. Since the year 1893 no death has occurred in the army of the United States directly resulting from alcoholism. The influence of the post exchange has been manifested also in the lessened number of cases due to intoxication tried by military courts. In fact, the exchange has relieved the army of one-half of the drunkenness that formerly tended to the demoralization of individuals and to the occurrence of infractions of discipline, assaults, injuries and deaths. It has become the recreation, reading and refreshment room, in fact, the club room of the enlisted men.

The passage of the prohibitory act was universally regarded by those who had the welfare of the army at heart as opening the way to the reestablishment of the conditions which existed prior to the installation of the exchange, when the nearest and generally patronized places of amusement and refreshment were the grog-shops and houses of evil repute which fringed each military reservation. Temperance enthusiasts hold that the proposed legislation does not involve a choice between the exchange and these low dives, but army officers who have lived all their lives in contact with the United States soldier have a better knowledge of what would be its results. Fortunately, however, the attorney-general has construed the law as prohibiting merely the assignment of any officer and the detail of any enlisted man to sell intoxicating drinks in the exchange. He holds that the meaning attached to any law by those who framed it or by those members of the legislature who discussed it prior to its passage can not control the construction of it. The requirement of the law that the Secretary of War shall issue such general orders as may be necessary to carry its provisions into full force and effect has brought out an order dated April 12, 1899, amending the exchange regulations so far as to authorize the sale of intoxicating drinks only by civilians employed for the purpose, and emphasizing the prohibition against the sale or use of ardent spirits in any branch of the exchange or in any encampment, fort or premises used for military purposes.

Whether beer may be used advantageously in civil life as an alternative to the use of spirits, is another question. The *Lancet* of April 1, 1899, considers the remedy in this instance to be at best only a shade better than the disease. It points to the signal failure of former enactments in England to discourage the drinking of spirits by encouraging the consumption of beer and suggests a study of the proceedings of coroners' and police courts, where brutality, crime and death, are so often associated with excesses in beer drinking. The successful results in our army are due to the military discipline which prevails in the post exchanges and which reduces to a minimum the possibility of the occurrence of dangerous excesses.

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Current Medical Literature.

Journal of Experimental Medicine, March.

1.—*Hemorrhagic Septicemia in Man Due to Capsulated Bacilli. *W. T. Howard, Jr.
2.—*Bacillus Capsulatus (Bacillus Pneumoniæ of Friedlaender?) with Especial Reference to its Connection with Acute Lobar Pneumonia. Joseph J. Curry.
3.—*Report of Experimental Work on Dilution Method of Immunization from Rabies. Follen Cabot.
4.—*Study of Spinal Cord by Nissl's Method in Typhoid Fever and in Experimental Infection with Typhoid Bacillus. Joseph Longworth Nichols.
5.—*Thermal Death-point of Tubercle Bacilli in Milk and Some Other Fluids. Theobald Smith.
6.— Changes Produced by the Growth of Bacteria in the Molecular Concentration and Electric Conductivity of Culture-Media. G. N. Stewart.
7.—*On Supra-Arterial Epicardial Fibroid Nodules. J. Mason Knox, Jr.

Bulletin of the Johns Hopkins Hospital, April.

8.—*Analysis of Cases of Tabes in Johns Hopkins Hospital and Dispensary from its Opening in May, 1889, to Dec. 1, 1898. H. M. Thomas.
9.—*On Typhoid Septicemia, with Report of Two Cases, one of which was a Typhoid Infection Without Intestinal Lesions. August Jerome Lartigau.
10.—*Cavities in the Brain Produced by the Bacillus Aerogenes Capsulatus. Robert Reuling and Arthur P. Herring.
11.—*Acute Fibrinopurulent Cerebrospinal Meningitis, Ependymitis, Abscesses of the Cerebrum, Gas Cysts of the Cerebrum, Cerebrospinal Exudation, and of the Liver, Due to the Bacillus Aerogenes Capsulatus. W. T. Howard, Jr.

Annals of Gynecology and Pediatry, April.

12.—*Contribution to Study of Albuminuria After Ether Narcosis. Wassil Popoff.
13.— Home Modification of Milk. John Lovett Morse.
14.—*Serum Treatment for Diphtheria in the "Stefanie" Kinderspital (402 cases) Third Report. Johann N. Bokay. Translated by Edward M. Plummer.

Western Medical Review (Lincoln, Neb.), April 15.

15.—*How Shall We Cure Posterior Displacements of the Uterus? D. C. Brockman.
16.— Interesting Case of Complete Prolapsus Uteri. J. Rudis-Jicinsky.
17.—*Mechanic Treatment of Hernia. Rufus D. Mason.
18.— Vesical Calculus, with Report of a Case. H. H. Stoner.
19.— Some of the Legal, Medical, and Humane Aspects of Insanity. C. C. Goddard.
20.— Injuries of Head. Charles C. Allison.
21.— Some Things Every Doctor Can Do. W. O. Henry.
22.— Keratitis. B. C. Kelly.

Northwestern Lancet (Minneapolis, Minn.), April 15.

23.—*Some of the Aspects of Renal Inadequacy. H. A. Tomlinson.
24.— The Duty of the Physician in Medicolegal Examinations of the Insane. Wm. B. Lyman.
25.— The Treatment of Nasal Catarrh by the General Practitioner. John McLean.

Pennsylvania Medical Journal (Pittsburg), April.

26.—*Puerperal Eclampsia. Eli Coover
27.— Cholelithiasis. C. A. Hamann.
28.— Influenza. I. R. Schoonmaker.
29.— Abortion. John M. Bertolet.
30.— Injurious Effects of Forced and Unnatural Breathing on Voice Production as an Art, and on Health of Individual. Carl Seiler.
31.— Placenta Previa, with Report of Cases. J. A. Patterson.

Denver Medical Times, April.

32.—*Intravenous Saline Infusion in Suppression of Urine and Collapse Due to Vomiting of Pregnancy. J. Riddle Goffe.
33.—*Early Tubal Pregnancy. H. D. Niles.
34.—*Acute Pneumonia. J. N. Hall.
35.— Treatment of Inevitable Abortion. E. O. Jones.
36.— Surgery in Country Practice. M. S. Chenoweth.
37.— Rational Treatment of High Temperatures. E. B. Jackson.
38.— Proper Method of Dressing the New-Born Infant. B. C. Hirst.
39.—*Two Rare Cases of Pelvic Cyst, with Remarks on Myomectomy. E. C. Dudley.

Dominion Medical Monthly (Toronto), April.

40.—*Acne Vulgaris and its Rational Treatment. Graham Chambers.
41.—*Traumatic Tetanus (or Lockjaw) as a Germ Disease, with Treatment by Internal Antisepsis—Report of a Case of Recovery in a Horse. W. R. Roome.

Merck's Archives (N. Y.), April.

42.—*Serum Treatment of Typhoid Fever. Horatio C. Wood, Jr.
43.—*On the Utility of Drugs in Typhoid Fever. Frank Woodbury.
44.— Pichi in Prostatic and Vesical Troubles. H. A. West.

Pacific Record of Medicine and Surgery, April 15.

45.—*A Further Report on a Case of Unilateral Hypertrophy of the Face, Hard Palate and Gums. D. W. Montgomery.
46.—*Three Cases of Puerperal Sepsis Successfully Treated with Anti-Streptococcus Serum. John F. Moran.
47.— Production of Certain Toxic Cases During Administration of Chloroform in the Presence of Naked Flames. A. B. McKee.
48.— Compound Fracture of Skull with Escape of Brain Matter. Henry Du Phelan.
49.— Case of Nephrolithotomy. Charles R. Harry.
50.—*Surgical Interference in Appendicitis (continued). Julius Rosenstirn.
51.— Law of Physician and Patient. Wm. C. Tait.

Colorado Medical Journal (Denver), April.

52.— Three Cases of Perineal Section; Imbedded Perineal Calculus; Some Specimens of Urinary Calculi. Wm. P. Munn.
53.—*Anesthesia and Septicemia. E. P. Hershey.
54.—*Some of the Fallacies Attending the Biologic and Chemic Examination of Drinking Water. J. A. Sewall.

Medical Sentinel (Portland, Ore.), April.

55.—*Gynecologic Training a Prerequisite for the Asylum Superintendent. E. Hall.
56.— Appendicitis. L. P. McCalla.
57.— Treatment of Chronic Ulcers of the Leg. John B. Corsiglia.

American Medical Compend (Toledo, Ohio), April.

58.— Removal of Diseased Parotid Glands. John S. Pyle.
59.— Importance of Keeping Nasal Cavities Clean and Aseptic in Chronic Nasal Catarrh. John North.
60.—*Rectal Diseases. C. E. Stewart.
61.— Rubeola. J. L. Baird.

Kansas City Medical Index-Lancet, April.

62.— Remarks on Serum Therapy. I. J. Wolf.
63.— Ovulation, Fecundation and Sexual Differentiation. W. G. Haning.
64.— Significance of Ocular Changes as an Aid to the General Practitioner in Diagnosis of Disease. W. H. Schultz.
65.— Puerperal Infection. Robert S. Spears.

Canada Lancet (Toronto), April.

66.— Recent Advances in Brain Surgery. Henry O'Neill.
67.— General Practitioner in Relation to the Insane. Ernest Hall.
68.—*Treatment of Diseases of Pigmentation. John V. Shoemaker.
69.— Corpulence and the Fatty Heart, with Cases. Thos. E. Satterthwaite.
70.— Diphtheria Antitoxin by the Mouth. John Zahorsky.
71.—*Relation of Chorea to Rheumatism. Robert B. Preble.

Oklahoma Medical Journal (Guthrie), April.

72.— Suprapubic Cystotomy for Prostatic Hypertrophy. T. A. Craven.
73.— Bowel Diseases Incident to Hot Weather. W. K. Harris.
74.— New Operation for Hernia. Emory Lanphear.

Southwestern Medical Record (Houston, Texas), April.

75.— Posterior Urethritis. J. L. Short.
76.— Nasal Obstruction and its Results. G. T. Swail.

Medical Fortnightly (St. Louis), April 15.

77.— Surgical Melange, Empyema of Chest; Abscess of Lung; Sarcoma, Popliteal Space; Sarcoma, Neck; Humerus Fracture United; Anal Fistulæ; Septum Nasi Deformity; Septi Nasi Protrusion. Merrill Ricketts.

Virginia Medical Semi-Monthly, April 14.

78.—*Carbolic Acid and Gangrene. Henry A. Leipziger.
79.— Jefferson and Vaccination. G. W. Drake.
80.—*Criticism of Whitehead's Operation for Piles. S. G. Gant.
81.— Disintegration of Phosphatic Calculi by Buffalo Lithia Water. J. Allison Hodges.
82.— Empyema of the Gall-Bladder. J. E. Summers, Jr.
83.—*Some Unusual Symptoms in a Case of Myxedema. Arnold Jolly.
84.— Some Useful Points in the Diagnosis of Diseases of the Stomach. Hugh McGuire.
85.— External Application of Cold Water to Allay Persistent Vomiting. Wm. Francis Mitchell.
86.— Movable Kidney. Lewis Schooler.
87.— Glaucoma. Robert M. Lapsley.
88.— Value of a Knowledge of Chemistry to the Physician. Thomas J. Hughes.

New York Medical Journal, April 29.

89.—*When to Operate for Appendicitis. Notes on Technics. Robert T. Morris.
90.—*The Technic of the Bottini Operation. Ramon Guitéras.
91.—*Report of a Necropsy in a Case of Acromegaly, with a Critic Review of the Recorded Pathologic Anatomy. Louis J. Mitchell and E. R. Le Count.
92.—*Prothymia: A New Faculty and its Localization. Wallace Wood.
93.— A Summer Fallacy. Ramsay MacNaughton.
94.— Case of Chronic Inflammatory Induration of the Corpora Cavernosa. W. R. Cochrane.

Boston Medical and Surgical Journal, April 27.

95.—*Personal Experience in Modern Operations for the Relief of Prostatic Obstruction. A. T. Cabot.
96.—*Traumatic Cerebral Edema; Its Pathology and Surgical Treatment. A Critic Study. J. W. Courtney.

Medical Record (N. Y.), April 29.

97.—*Insanity in Connection with Disease of the Ductless Glands. Allan McLane Hamilton.
98.—*Devious Manifestations of Epilepsy. Sanger Brown.
99.—*"The Temptation of Skill" (with Special Reference to Operative Gynecology). Eugene Coleman Savidge.
100.— Pyelonephritis and Ulcerative Endocarditis as a Complication of Gonorrhea—The Gonococcus Found in Pure Culture Upon the Diseased Heart Valve. Henry W. Berg.

Cincinnati Lancet-Clinic, April 29.

101.—*Treatment of Carbuncles. Milton P. Creel.
102.— Case of Sepsis Treated with Antistreptococcus Serum. Mark Millikin.

Philadelphia Medical Journal, April 29.

103.— The Debt of the Public to the Medical Profession. W. W. Keen.
104.—*Municipal Medical Inspection of Schools. Norvelle Wallace Sharpe.
105.—*A Case of Traumatic Epilepsy in which an Operation was Performed with Relief to the Present Time—Twenty-two Months After the Operation. W. H. Hudson.
106.— Acetosoluble Albumin in the Urine. A Brief Review of the Literature on the Subject and a Report of Two Cases. W. M. L. Coplin.
107.—*Syphilitic Gastralgia. Allen A. Jones.
108.— Dental Diseases and Trigeminal Neuralgia. Henry H. Burchard.

Medical News (N. Y.), April 29.

109.—*Bacillus Icteroides and Bacillus Choleræ Suis. A Preliminary Note. Walter Reed and James Carroll.
110.—*Cardiaphobia or Heart Fear. W. T. English.
111.— A Bacillus Resembling the Diphtheria Bacillus in all Cultural Characteristics, but not Producing Diphtheria Toxin. Louise Dudley Davis.
112.—*Experiment in Transplantation of the Entire Human Ovary. James H. Glass.
113.— Serum Treatment of Diphtheria in the New York Foundling Hospital During 1898. W. P. Northrup.

AMERICAN.

1.—Hemorrhagic Septicemia in Capsulated Bacillus.—Howard discusses cases of septicemia accompanied by hemorrhage into the skin and usually also in the liver, spleen, kidneys, heart, stomach and intestines, in which capsulated bacilli have been found the only or chief micro organisms. After reviewing the literature, he describes two cases which came under his own observation, in one of which, besides the clinic history, the results of autopsy and the bacteriologic examination, both microscopic and in culture experiments, are detailed in full. In this case he found a capsulated bacillus belonging to the type of the Friedländer species, but different from those already described, chiefly as to varying amounts of gas and acid productions, the coagulation of milk and reaction to Gram's stains and also to the results of animal inoculation. He concludes that hemorrhagic septicemia is not to be regarded as a distinct disease but rather as a toxemia and that it can be produced not only by capsulated bacilli, but by various other bacteria.

2.—Bacillus Capsulatus in Pneumonia, Etc.—Curry reports twelve cases of pneumonia, lung gangrene, diphtheria, tonsillitis, and one of otitis accompanying fracture of the skull in which a capsulated bacillus of the Friedländer type was found. He does not think, however, that its pathogenic relation was positive excepting in two cases, the one of gangrene of the lungs and that of otitis. He discusses the question as to whether acute lobar pneumonia can be produced by other organisms than the pneumococcus, and concludes that it can not, in opposition to a few investigators who have held that the Friedländer and other bacteria may sometimes produce it. It is an easy thing to overlook the pneumococci unless the examinations are very complete.

3.—Immunization from Rabies.—Cabot reports experimental work with the dilution method of immunization from rabies and compares it with the attenuation dried cord method of Pasteur. He describes a modification of the method of Högyes of Budapest, which he thinks has some advantage, but his conclusions do not favor this method as opposed to the Pasteur plan. His conclusions are as follows: 1. He has simplified the dilution method by using a stock glycerin emulsion of the virulent cord, from which the desired dilutions can be readily prepared. The proportion of glycerin should not exceed one-fifth part, if it is desired to retain the full virulence of the emulsion. 2. There is some danger of giving rabies to animals in the dilution immunization treatment, a danger which is not present in the Pasteur method. 3. The dried-cord method does not rest solely on the principle of dilution, but is also based on the attenuation of virus. 4. The Pasteur method being entirely free from the element of danger which pertains to the glycerin dilution method and resting on a sounder experimental basis, is the one to be preferred.

4.—Nerve-Cells in Typhoid.—Nichol's paper gives the results of the study of certain changes observed by Nissl's method in three cases of typhoid fever and in a series of experimental inoculations of rabbits with the typhoid bacillus. In the human cases, which were of the severe type, the spinal cord and root ganglia were examined, and the same with the addition of the peripheral nerves in the experimental cases. His conclusions were:

1. The application of the Nissl method to the study of the motor cells of the spinal cord, and the nerve cells of the dorsal root ganglia in typhoid fever, shows that the cells regularly suffer pathologic changes in the course of infection.

2. The alterations in the motor cells are more constant and of a severer grade than are those in the cells of the sensory ganglia. The more characteristic changes consist of disintegration, solution and destruction of the chromatic substance of the cell, starting from the axone hillock and proceeding toward the nucleus. Coincidently the nuclei of the affected cells seek the periphery. Alterations are also suffered by the nucleus and nucleolus.

3. While this central form of chromatolysis is the prevailing type of pathologic change, disintegration, etc., of the Nissl bodies situated in the periphery of the cell and in the dendrites, is also observed (peripheral chromatolysis).

4. In experimental infection with typhoid bacilli in rabbits, a similar change of lesions in the corresponding nerve cells in the spinal cord and ganglia is encountered.

5. The main or central type of lesions discovered is identic with that found in man and animals after section, destruction, or even slight injury of the peripheral nerves.

6. The examination of the peripheral nerves arising from the lumbar segment of the spinal cord (the site in man and rabbit of the most profound changes) in rabbits inoculated with typhoid bacilli showed well marked evidences of parenchymatous degeneration.

7. It is probable that lesions of the peripheral nerves in typhoid fever in human beings are common and that the post-typhoid hyperesthesias and paralyses are due to this cause.

8. Restitution of the chromatic granules may take place in the affected nerve cells, the new foundation beginning about the nucleus and extending through the protoplasm.

5. **Tubercule Bacilli in Milk.**—Smith finds the tubercle bacilli are not more resistant to heat than many other bacilli not producing spores. When, however, milk is used as the suspending fluid, the formation of a surface pellicle into which the bacilli are carried by fat globules may so shield them as to render their destruction more difficult. This fact, he thinks, explains the discordant results obtained by some observers. The conclusions of his paper are: 1. Tubercle bacilli, when suspended in distilled water, normal salt solution, bouillon and milk, are destroyed at 60 degrees C. in fifteen to twenty minutes. The larger number are destroyed in five to ten minutes. 2. When tubercle bacilli are suspended in milk, the pellicle which forms during the exposure at 60 degrees C. may contain living bacilli after sixty minutes.

7.—**Epicardial Fibroid Nodules.**—Knox concludes:

1. Fibroid nodules seated in the epicardium directly over branches of the coronary arteries of the heart are not uncommon. They may be present in large numbers and are found most frequently on the surface of the ventricles, but may occur over the auricles and even on the outer surface of the ascending aorta. They are rarely observed over the coronary veins.

2. While often resembling in gross and superficial appearances the nodules described by various writers, under the name of the "periarteritis nodosa," they differ from these in essential respects. They are seated outside of the adventitial coat and lie within the epicardium. They are composed of dense, fibrous, sclerotic tissue, poor in cells. In earlier stages of their formation they are richer in cells, both fibroblasts and lymphoid cells.

3. These supra-arterial nodules bear no definite relation to endarteritis, although they may be associated with this condition.

4. They are found with great regularity in the arterial wall immediately beneath the nodule, changes which indicated a weakening of the walls in this situation. In some instances the muscular coat was thinned and degenerated, but the most common and important change was reduction and often disappearance of the elastic lamellæ and fibers, the outer elastic lamella being the one frequently and intensely affected. These lesions were often limited to the segment of the same artery, being free from similar alterations, or presenting them only in a slight degree. It is suggested that the absence on the outer or epicardial segment of the firm support afforded to the artery on the inner or myocardial aspect by the surrounding tissues renders the former more liable to damage to the elastic tissue resulting from irregularities and increase of blood pressure associated perhaps with defects of nutrition.

5. In consequence of the weakening in the arterial wall the artery would tend to bulge at the affected spot toward the epicardium were this tendency not restrained. The formation of the dense supra-arterial nodule of fibrous tissue over the weakened area holds this tendency in check and may be regarded as an adaptive or compensatory change.

The question as to the immediate exciting cause of the new growth of tissue offers the same difficulties as that pertaining in general to similar growths of connective tissue. Some would, doubtless, attribute it to direct stimulation from the pressure and shock of the impinging artery, others to defects in the tissue, and still others to a disturbance of the neighborhood relations of the part. It is not deemed necessary to enter into discussion of the various hypotheses.

8.—**Tabes.**—Thomas analyzes the cases of tabes treated in the Johns Hopkins Hospital as to their causes, symptoms, etc. He finds that in a large proportion of cases the history of syphilis can be secured, but in others, no record of the kind can be had and this, with some other facts, leads him to doubt that syphilis is the only factor in the causation. His analysis of the symptoms is quite elaborate and can not be detailed here. In two cases general paresis developed while the patients were under observation.

9.—**Typhoid Septicemia.**—Lartigau discusses typhoid septicemia and reports two cases, both with autopsies and bacteriologic examinations, in which the bacillus typhosus was found. In the second case, the intestinal lesions usually met with in typhoid were absent.

10.—**Brain Centers from Capsulated Bacillus.**—Reuling and Herring report and illustrate a case of death following the third day after laparotomy from gunshot wounds in which there were found cavities of varying sizes in the brain, from .5 to 5 cm. in length in the margin of which there was found a bacillus identified with those described by Welch and Nuttall under the name of bacillus aerogenes capsulatus. No cavities were found in other organs, excepting in the uterus, where no bacilli were found. They are inclined to consider the changes largely post mortem, the distribution of the organisms most likely occurring in the preagonal period. Vide JOURNAL, p. 1003.

11.—**Gas Cysts in Brain, etc.**—Howard reports a case in which gas cysts occurred in the brain, spinal membranes and liver. The bacilli that were found were the bacillus aerogenes capsulatus. Howard thinks that the presence of these in such great numbers in this case in the brain, and their rarity in the blood-vessels, etc., precludes the idea that they were post-mortem invaders. Vide JOURNAL, p. 1003.

12.—**Albuminuria after Ether Narcosis.**—Popoff recapitulates the principal facts in the literature on this subject and reports some personal investigations. The general results from both appear to be that ether narcosis, while it may somewhat intensify an existing albuminuria and even produce a transient one, is not likely to do permanent injury in this way. From his personal researches and those of Wunderlich, Popoff does not consider the albuminuria from ether as due to nephritis, but rather to the physiologic action of the agent on blood-pressure.

14.—**Serum Therapy in Diphtheria.**—Bokay gives an elaborate analysis of his 402 cases, which, fairly and moderately stated, adds another testimony as to the value of antitoxin treatment in diphtheria. He compares his results as he gives them with those of others, both as regards general results and special symptoms and complications, so that his article is a valuable general discussion of the subject. In closing, when quoting the opinion of Purjesz, stated a year before, that "it is on the whole questionable whether the hour of serum therapy has yet struck," he adds that, for him, the accumulating clinical evidence shows beyond doubt that the "last hour of that effort to question the signal value of serum therapy in practical life has struck."

15.—**Uterine Retrodeviation.**—Brockman narrows down the ordinary available operations for retrouterine displacements to Alexander's operation and suspensio uteri. The reason Alexander's operation has often failed is that complicating conditions, adhesions, overheavy uterus, chronic inflammation, ovarian disease or pelvic tumor are not recognized, or that the normal condition and age of the round ligaments does not exist. In other words, this operation requires a simple, uncomplicated retrodeviation. In case of any condition requiring laparotomy, an existing backward displacement will be best relieved by a carefully done ventral suspension or shortening of the round ligaments. The paper closes with a protest against unnecessarily complicated, and frequently dangerous, operations that are too often, he claims, employed instead of the simpler and safer one.

17.—**Mechanic Treatment of Hernia.**—Mason details the ordinary mechanism of hernia, showing that upward and backward pressure is required to reduce it, but when reduced, it must be kept in place by downward and backward pressure. He gives diagrams illustrating his statements and figures the faulty and the correct truss.

23.—**Renal Inadequacy.**—Tomlinson of the St. Peter (Minn.) asylum reports the results of urinary examination of 1106 insane patients admitted in four years, with special reference to the questions of the functional capacity of the kidneys. In a large majority of the cases there was nothing in the history or symptoms on admission to indicate renal disease, and about 60 per cent. of them recovered entirely or sufficiently to enable them to live outside the hospital. The death-rate was approximately only 3 per cent. Yet in the whole number the specific gravity was reduced in 180, urea decreased in 597, albumin present in 492 (in the table, 204 in the text) and sugar in 200. It will be seen, therefore, that there may be serious apparent functional renal defect in these patients, which may later entirely disappear. In the experience of the asylum, when patients are admitted with marked signs of renal inadequacy the improvement in the mental state goes, *pari passu* with the restoration of the constituents of the urine to the normal relations, both as to quality and quantity. He reports several cases, illustrating the graver forms of renal inadequacy. In Tomlinson's opinion, renal inadequacy, independent of organic disease, as a temporary condition, is quite common in advanced life, and in some cases is congenital and probably due to some nervous weakness of the individual. In his experience, when the quantity of urine is decreased below 100 c.c., urea below 2 per cent., chlorids below 10 per cent., while the phosphoric acid is increased above 2 per cent. and the sulphates above 15 per cent., urinemia is impending.

26.—Puerperal Eclampsia.—Coover believes that puerperal eclampsia may sometimes be induced by atmospheric influences producing epidemics, and refers to his experience in confirmation of this view. In 1872 3 he traced an epidemic of this kind over a tract of country about one mile wide from Harrisburg to Baltimore, and another similar but more limited one in 1880 1. He would commence the treatment in well-nourished plethoric women with free bleeding, and if this is insufficient he would give 40 to 50 grains of chloral with a like amount of bromid per rectum, and repeat if necessary, every hour. In nervous patients without signs of albuminuria he would give, on the other hand, morphin hypodermically, and in any case a dose of calomel followed in a few hours by a brisk purgative. Inhalations of chloroform, ether, etc., are often of service. Between the attacks, Basham's mixture is a valuable blood tonic with very frequent pulse and high temperature. Norwood's tincture of veratrum viride in 6- to 12 drop doses, or tincture of digitalis in 10- to 20 drop doses are useful. Morphin, he cautions, is to be used only in the neurasthenic cases where the urinemic factor is not prominent.

32.—Intravenous Infusion.—Goffe reports a case in which intravenous saline infusions were used in a case of severe vomiting in pregnancy, which was not relieved by emptying the uterus. The patient's condition was desperate. She was pulseless at the wrist, cold in the extremities, while temperature elsewhere was 101. The median basilic vein in the left arm was opened and a current of normal salt solution at the temperature of 110 F. was allowed to flow into the vein. Her pulse came up strong and full, color returned to her face, breathing was natural, she dropped asleep and, when two quarts had been injected, beads of hot perspiration began to appear on the forehead and gradually spread over the entire body. The injection was continued until five quarts had been passed, and at this stage perspiration was exceedingly active. The time consumed in the infusion was forty-five minutes. The patient was then wrapped in blankets and covered with a rubber sheet. At the end of two hours and forty five minutes thirteen ounces of urine, the first passed in forty-eight hours, were withdrawn with the catheter. The nitric acid test showed 50 per cent. albumin. During the next twenty four hours she passed eighty three ounces of urine, and from this time on steadily improved until at the end of two weeks she was able to return to her home. At last accounts she was still improving. Goffe attributes the good results to: 1, the high temperature of the infusion, and 2, the large quantity employed.

33.—Tubal Pregnancy.—Nile's paper pleads for earlier diagnosis and operation in cases of tubal pregnancy. He tabulates the diagnostic points and compares them with those of miscarriage and peritonitis, and as regards the operation, objects to the vaginal methods, believing celiotomy and thorough flushing without drainage are almost essential to success.

34.—Acute Pneumonia.—Vide JOURNAL, Nov. 5, 1898, p. 1115.

39.—Pelvic Cysts.—Vide JOURNAL, February 4, p. 255.

40.—Acne.—Chambers describes the symptoms and pathology of acne, limiting it to a folliculitis or perifolliculitis following a hyperkeratosis of the epidermis, with comedones, thus excluding the drug acnes, etc. He usually commences treatment with an ointment of resorcin and sulphur, applied every night after shampooing the face with green soap, and washed off in the morning. The next indication is the removal of comedones and lancing of pustles, etc. When the face is so much improved, after two or three weeks' treatment that only a few papules remain, all that is required is an antiseptic wash, such as corrosive sublimate (1–700) or 1–1000 formaldehyde. Constitutional treatment will vary according to the circumstances. The bowels should be looked after, diet should be plain, without stimulants; tonics when debility and anemia are present, sometimes cod-liver oil, and plenty of fresh air and exercise. Cold sponging with vigorous friction is worth trying.

41.—Tetanus.—Roome discusses the nature of tetanus according to modern views, and reports a case in a horse treated with carbolic acid injections hypodermically, and carbolic acid and bromid of potash by the mouth in horse doses. The carbolic acid doses were increased until finally .5-dram doses and 1 dram of iodid of potash were given in solution three times a day. Local treatment was solution of carbolic acid washings. There was complete recovery in six weeks.

42.—Serum Therapy of Typhoid.—Wood remarks that serum treatment would apparently be especially applicable to typhoid fever, with its slow course and tendency to relapses. Weisbecker has tried the injection of human serum from patients convalescing from typhoid and reported favorable results, and Walzer had similar experiences. The difficulty, however, of obtaining this material is in the way of this method and he, therefore, calls attention to the experiments of Jez, who with an extract made from the glands of rabbits, which had been previously immunized to typhoid, macerated in a mixture of alcohol and normal salt solution, has been able to neutralize the toxin of the fever in man. He employed it in doses of from ½ to 1 teaspoonful *per os*, in eighteen cases, with practically uniform results. The temperature curve lost its continuous type and took on that of a remittent fever while the pulse became correspondingly slower and fuller. Simultaneously other symptoms underwent a marked change for the better and the patient was considered as convalescent the second or third week of the treatment. As Wood remarks, this method would seem to merit further trial, especially as it does not interfere with any other treatment.

43.—Drugs in Typhoid Fever.—Woodbury considers that the medicinal agents of most importance are antiseptics. Among them he includes quinin and alcohol, and calomel in full doses in the beginning of the attack. The drug he prefers above others is beta-naphthol, which has the advantage of being entirely free from any damaging systemic action in the doses required, namely, two or three grains every two hours. It is a noticeable fact that while this is being given the urine shows less tendency to fermentation and it is to be presumed that if the urine is less aseptic, the blood must also be similarly affected. Other remedies he mentions are hydrochloric acid in doses of 10 drops of the dilute acid every two hours, and the classic oil of turpentin.

45.—Unilateral Hypertrophy of Face.—Vide JOURNAL, April 15, p. 820.

46.—Antistreptococcus in Puerpal Sepsis.—Moran reports three cases treated with success. In one case it required 20 and in another 40 c.c. at a dose to reduce the temperature. In the other 10 c.c. was sufficient to produce a reduction. He thinks that the general lowering of the temperature in from seven to twenty-four hours, with a corresponding reduction and steadying of the pulse, speaks well for this method.

50.—Appendicitis.—Rosenstirn finishes an article very full of literary references, on the surgical treatment of appendicitis. He thinks it safe to formulate the mode of treatment in this disease along the following lines: for every case, at first, absolute rest in bed and treatment as just described. If possible defer operation until after the acute stage. Operate immediand during attack: 1, if diffuse peritonitis has already set in and the patient is not already in agony; 2, if the appendicitic attack commences so violently that the immediate outbreak of diffuse peritonitis must be expected, then operate day or night, and arrange quickly, right on the spot, the best possible conditions for the operation; 3, if in spite of correct medical treatment no improvement sets in after forty-eight to seventy-two hours, as may be expected under ordinary circumstances, and unmistakable signs of the formation of an abscess are recognized; 4, if symptoms of an intestinal obstruction or ileus are present. For recurrent appendicitis, operations between attacks should be done: 1, if mild attacks come on frequently; 2, if the attacks are progressively more severe; 3, if after the attack there remains chronic invalidism such as serious gastric disturbances or constant pain, interfering with locomotion or work.

53.—Anesthesia and Septicemia.—Hershey objects to the use of anesthesia in curetting operations, thus involving the danger of septicemia. The depressing effects of the anesthesia should be avoided when the whole system needs stimulation and support against the dangers of septicemia.

54.—Examination of Drinking Water.—Sewall believes that the bacteriologic and chemic examination of drinking water is liable to various fallacies and can at best determine only the possibilities and probabilities of pollution. A knowledge of the source of supply, of the conduits and reservoirs, and the character and management of the filters, if such exist, are the best sources of knowledge as to the safety. Examinations, chemic and bacteriologic, should be made, but above all, the inspection of these special points should be insured.

55.—Gynecologic Training.—Hall, who in his writings elsewhere has urged the importance of gynecologic work in the asylums, reports twenty-three cases of insane women suffering from gynecologic diseases. Some of these were relieved by operation. He calls attention to the facts that both the patients and their friends were ignorant of their local troubles and 60 per cent. had been committed to the asylum without any mention of the disorder.

60.—Rectal Disorders.—Stewart calls attention to the frequency and importance of rectal disorders and remarks that considering these facts it seems strange that life insurance companies do not require rectal examinations as one of the conditions in

assuming a life risk. Besides the possibility of fatal hemorrhage from piles, he refers to the frequency with which the rectum is the location of syphilitic lesions and of malignant disease. On these accounts also, rectal disorders should be carefully studied by every medical student and practitioner.

68. **Diseases of Pigmentation.**—This paper is printed as an original, but appeared in full in the JOURNAL, March 11, p. 533.

71. **Chorea and Rheumatism.**—This paper also appears as original, but has been printed in the JOURNAL, March 11, p. 529.

78. **Carbolic Acid Gangrene.**—Leipziger refers to the lack of mention of this complication in surgical works, refers to the cases collected by Honsal, Broughan and others, and reports two personal observations. He concludes that: 1. Long continued use of even the weakest solutions are dangerous. 2. Encircling the part with the dressing is given as a predisposing factor. 3. Idiosyncrasy is possible and quite probable. 4. The general sale of the drug should certainly be restricted. 5. The use of carbolic acid solution as a dressing to injuries of the extremities might be discontinued in view of the efficacy and equal cheapness of many less dangerous antiseptics. (Vide JOURNAL, April 1, p. 727.)

80. **Whitehead's Operation for Piles.**—Gant criticizes Whitehead's operation, under which he includes all those methods that seek to excise the mucous membrane of the lower end of the rectum in order to destroy the so-called pile-bearing area and which has been elaborated by the orificialists. He summarizes the criticisms as follow: 1. It is not suited for ordinary or bad cases of piles. 2. It is difficult and bloody. 3. Patients are detained in bed from six to fifteen days longer than after the clamp and cautery or ligature operation. 4. Owing to tension, the post-operative pains are severe and may continue for several days. 5. Infection is frequent and terminates in a stitch or deep abscess and fistula. 6. Because of non-union, ulceration, stricture, and pruritus are common sequelæ. 7. The portion of bowel between the anus and the end of the retracted intestine loses its sensitiveness, and there is also an absence of the normal secretion. 8. The nervous and mental state of these sufferers is pitiable to behold, and many contract the morphin habit, while others turn up as chronic invalids in some sanitarium or asylum.

83. **Myxedema.**—This paper appeared in full in the JOURNAL, April 15, p. 814.

89. **Operation for Appendicitis.**—Morris claims that operation for appendicitis should be made on first diagnosis under the following conditions: 1, as soon as the diagnosis of appendicitis has been made, when neighboring structures are still exempt, in order to prevent extension of infection; 2, in cases of wide-spread infection, to prevent its extending still further; 3, in cases where appendicitis is subsiding, in order to prevent exacerbations, tedious convalescence and post infective peritoneal adhesions; 4, in cases where all evidence of acute infection has subsided, provided that accurate palpation shows that the appendix is the seat of chronic infection. After one or more acute attacks of appendicitis, we find hard concretions or entrapped fecal contents in nearly 20 per cent. of the cases, partial or complete mucous inclusions in more than 80 per cent. The reason why we are to operate as soon as the diagnosis is made in these cases is because the surgical death-rate is lower than the medical, with proper surgery, and the suffering of the patient is much less as is also the period for which he is disabled. He discusses certain matters of the technic and objects to iodoform gauze or simple gauze packing, and the leaving of infected appendices *in situ*. The plan of making long incisions and a partial evisceration of the patient is also objected to. He does not object to allowing pus to flow over the peritoneum provided it is cleansed out from time to time with peroxid of hydrogen during the operation.

90. **Bottini's Operation.**—Guitéras describes the condition of prostatic hypertrophy and its general treatment, and gives an elaborate description of the method of Bottini's operation, with illustrations of instruments, etc. He believes that this is the procedure for this condition that exposes the patient to the least amount of danger, generally gives relief and diminishes the amount of residual urine.

91. **Acromegaly.**—Mitchell and LeCount complete their paper, which was begun in a previous number. After a description of the tumor removed, which is one of the largest growths in the region of the hypophysis reported, and its nature, they conclude as follows:

1. The cases of acromegaly associated with true tumor of the hypophysis are certainly not as numerous as has been heretofore supposed.

2. There is not as much constancy in the pathologic condition of the hypophysis as there is in an enlargement of the heart, the thyroid gland, or the sella turcica.

3. Acromegaly does not depend, at least not solely, upon abolition of any function of the hypophysis.

4. A relationship between the thyroid gland and the hypophysis has already been amply proved.

5. It is not at all improbable that proliferation of the histologic elements of the hypophysis may be instituted in some cases by a primary enlargement of the sella turcica; in other cases, an edema or hemorrhage *ex vacuo*.

6. We have no reason for supposing that enlargement of the sella turcica may not be as constant an occurrence in acromegaly as the changes in other bones, or that it might not take place from a similar cause or causes.

92. **Prothymia.**—Wood calls attention to a peculiarity which he has met with in the brains of certain animals, upon which he makes a rather forced generalization. The peculiarity consists of the swelling or bulging forward of the anterior metopic lobule in certain animals, and the reverse condition in certain others. He associates it with a tendency to come forward or advance, and the opposite condition with the opposite tendency.

95. **Prostatic Hypertrophy.**—Cabot reports sixteen cases of orchidectomy and prostatectomy, including four of both in the same individual, and discusses the results. He does not think that his former conclusions, deduced in 1896, are borne out by his later experience. The two operations, instead of being as nearly equal as possible in their results are different in this respect, and he believes that prostatectomy offers a decidedly better prospect of relief than the other and is especially applicable in cases where the obstruction is due to the growth into the bladder of prostatic projections which encroach on the urethral orifice.

96. **Traumatic Cerebral Edema.**—Courtney concludes his discussion of cerebral edema, which has been running through several numbers of the *Journal*. He says that a final summary of all the evidence at command simply serves to confirm the conclusions already advanced, and these may be recapitulated as follows:

1. That traumatic cerebral edema can find no place as a pathologic or clinical entity.

2. That it is primarily the inevitable sequence in time of that complex of pathologic conditions which we designate contusion.

3. That inasmuch as contusion of the brain and its meninges is most commonly met with as a concomitant lesion to the more macroscopic lesions designated hemorrhage and laceration, the primary seat and extent of its accompanying edema will be largely fortuitous.

4. That in the rare instances in which the application of a traumatizing force is expended in the production of a local contusion of the brain cortex or its meninges, the brain is of itself abundantly able to rid itself of the edema through its venous channels.

5. That in the remaining cases in which the contusion is primarily extensive in the cerebrum, or when it affects the cerebellum or bulb, the factors which enter into the mechanism of the production of the edema are such as to preclude the possibility of operative relief.

6. The contusion can, *per se*, easily cause death.

7. That death in such cases results from anemia of the bulb.

97. **Insanity and Ductless Glands.**—Hamilton's paper discusses the mental symptoms accompanying certain diseases of the ductless glands, such as Graves' disease, myxedema, acromegaly. The use of thyroid extract in myxedema is well known, and it seems to have been of advantage in well-known cases of mental disorder. In exophthalmic cases he has used adrenal extract with benefit, and he believes that it can be sometimes used as a substitute for narcotics such as morphin and hyoscin.

98. **Epilepsy.**—Brown reports five cases of epilepsy with special manifestations, one of which, following nightmare, is a notable one, as complete retention of consciousness was reported throughout the attack of grand mal. He believes that there is a dubious borderland between hysteria and epilepsy, but that positive manifestations of the more serious disorder will generally eventually appear.

99. **Operative Gynecology.**—Savidge asks whether it is true that we operate too much. He goes over the various operations and their indications in detail, including the leading gynecologic operations and some that are not especially gynecologic, such as appendicitis. He believes that the operation for retrodeviation will become less frequent, and as regards appendicitis, he takes rather a conservative view.

101. **Carbuncles.**—Creel has relied on ecthol given internally,

in doses of a teaspoonful, in cases of carbuncle, flax-seed poultices applied locally, emptying of pus, scraping out of dead tissue and cleansing with peroxid of hydrogen; after this a topic application of ecthol on absorbent cotton every four to eight hours. The average duration of this treatment in his cases was ten days.

104.—Medical Inspection of Schools.—An inspection, extending over a period of eleven weeks, was instituted and carried out under the sanction and co operation of the St. Louis Board of Education, to demonstrate the importance of establishing adequate medical inspection over the local schools; the plan embraced the daily inspection of the pupils of ten schools. Each pupil found to be ailing or thought to be indisposed was brought to the notice of the inspector, who was furnished with the proper facilities for making proper examination, and in case of necessity making cultures from suspicious throat cases. No medical treatment was extended by the physician, but each case of illness was immediately reported to the principal, with proper suggestions for the disposal of the child found to be ill. An examination of the report, based on medical inspection of approximately 10,000 pupils, during one quarter, discloses 1600 cases of ailments and diseases; 1565 were reported for medical examination and of this number 156 were recommended for temporary dismissal on account of existing infirmity or contagious condition; 76 were suffering from the various infectious diseases, diphtheria, scarlet fever, measles and whooping-cough. Of the total ailments found, 49 per cent. were affections of the oral and respiratory tracts, while diseases of the skin numbered forty five, some of them being of a communicable nature.

105.—Traumatic Epilepsy.—Reporting a case in which operation resorted to four years after injury has given complete relief, Hudson calls attention again to the symptom of excessive hyperesthesia existing about the head after certain cases of cerebral injuries, as possibly indicating adhesions between the brain and dura; his experience in this and one other leads him to confirm this theory.

107.—Syphilitic Gastralgia.—Attention is directed by Jones to the importance of considering the etiologic relationship between syphilis and the painful gastric neuroses, unaccompanied by any organic gastric lesion or tabetic symptoms. Two cases are reported, undoubtedly specific, the gastralgic pains and symptoms responding readily to the administration of potassium iodid or the mixed treatment.

109.—Bacillus Icteroides.—Reed and Carroll report, with preliminary notes, the results of their study of the bacillus icteroides and that of hog cholera, and believe that the former is a variety of the latter and should be considered as only a secondary invader in yellow fever. They find that Sternberg's bacillus *x* presents marked differences from the foregoing both as regards its biologic character and its pathogenic action on animals. They reserve for a future paper a more detailed description of their methods.

110.—Cardiaphobia.—English proposes the term cardiaphobia or heart fear for certain symptoms that have been long observed in cases of functional and sometimes organic trouble of the heart. It may be either psychic or organic in its origin and nature, or both combined. Its prognosis is generally favorable, though each case must be considered by itself. The fact that it is more often found in functional than in organic heart trouble should be borne in mind. He condemns the bromids, but recommends chloral in full doses, and trional. Tonics must be administered to relieve the nerve outlay.

112.—Ovarian Transplantation.—Glass reports a case in which after double oöphorectomy, the patient suffered from aggravated symptoms of the menopause with complete loss of sexual feeling. Having at the same time a case in which one ovary was to be removed, he operated on both cases at the same time, the removed ovary being kept in a warm normal salt solution until it was transplanted in as nearly as possible its normal position in the first named patient. The recovery was uninterrupted and the patient informed him that six days after the operation she had a condition of sexual erethism which lasted for several days, and that since that time positive sexual feeling has been present. Menstruation occurred sixteen days after the transplantation and did not recur again for seven months. At this time, eight months after the operation, the patient had apparently regained her perfect normal health in all respects.

FOREIGN.

British Medical Journal, April 22.

Dangers of Delay. MAYO ROBSON.—The author protests in his address before the Nottingham Medico-Chirurgical Society, against certain conservative tendencies in surgery. Among the conditions in which he thinks this tendency does harm he mentions tuberculosis of the joints, cancer of the breast and other cancers, tuberculous peritonitis, which is easily relieved by a very simple operation of opening and draining the abdominal cavity if seen early. As regards appendicitis, he takes the radical view which favors early and general operation. Cholelithiasis, perforating gastric ulcer, perforating typhoid ulcer, dilatation of the stomach, stricture of the pylorus, intestinal obstruction, and ovarian and uterine tumors are other diseased conditions in which he advocates early operation as the simplest and best treatment.

Prognosis and Treatment of Acute Intussusception. GEORGE HEATON.—We have of late years come to consider intussusception as much more frequent in young children than was formerly believed, its rapid fatality having largely disguised or prevented its diagnosis. He does not believe in the treatment by bowel inflation, the dangers of which are the risk of overdistension and rupture, the impossibility of observing the complete reduction, and the loss of time. Abdominal section is the treatment par excellence. In some cases the operation is simple, in others it is very severe. In reducible cases the bowels should be replaced in the normal condition, which is fairly easy excepting in the last inch or so of intussusception. Here much care must be exerted to prevent injury to the swollen and edematous bowel. In cases that are irreducible or gangrenous the matter is very much more serious and the ideal method is to excise the whole of the intussusception and make an end-to-end union of the divided intestines. Unfortunately patients are rarely in a condition to stand so severe an operation. He reports four cases, recovery in all but one.

Peritonitis a Cause of Increased Peristalsis in the Rectum, etc. CHARLES W. CATHCART.—Attention is called to the possibility of increased action of the bowels from extra intestinal lesion in peritonitis, and three cases reported. In reviewing the literature, the author finds that this possibility has been too little mentioned and less importance attached to it than it deserves. He thinks we are justified in believing that as a result of irritation around the bowels (generally from peritonitis) the following symptoms may be produced: increased peristalsis, amounting sometimes to severe spasm of the small and greater portion of the large intestines, the relaxation of the sphincter, frequent evacuation and intense straining and tenesmus in severe cases where the rectum is involved, but he believes that from the knowledge gained in the study of these symptoms certain advantages may be derived, as:

1. Such cases as the first two described will be clearly understood and therefore promptly and efficiently treated when they present themselves.

2. The possibility that increased action of other parts of the intestine may be due to a cause outside and not inside the walls of the bowel may often help us to account for otherwise obscure symptoms in ways that we perhaps can not as yet realize.

3. The probability that colic may in like manner be caused by irritation outside as well as inside the bowel may be most valuable in helping us to form a diagnosis in a difficult case. Hitherto most of us have only recognized that many of the symptoms of peritonitis and of colic (intestinal, renal or biliary) are often very much alike. Now we may be prepared to believe that some of them are identic. This, instead of discouraging us, should have the opposite effect. We shall know what symptoms to accept as possibly common to several causes, and we shall not put too much stress on them. This will make us seek more eagerly for points in differential diagnosis. Thus, perhaps, symptoms which otherwise might have been missed or passed over as unimportant will be found lying ready to our hands as invaluable guides, when we understand how to look for and use them.

Centralblatt f. Gynecologie (Leipsic), 1899, No. 13.

Total Extirpation of Uterus on Account of Rupture during Delivery. A. SOLOWIJ.—The question of which route to choose in ablating the uterus in these conditions is elucidated by a case reported in which the uterus was extirpated per vaginam. The patient died the following day, and at necropsy incipient peritonitis was noted and also a tear in the peritoneum which was not discovered during the vaginal operation, but would have been if the abomen had been opened.

Deutsche Medicinische Wochenschrift (Berlin), April 13.

Leucocytosis and the Iodin Reaction in the Leucocytes. S. KAMINER.—As results of recent research the writer states that the reaction was only positive with existing leucocytosis, but that leucocytosis may exist in inflammatory diseases without the iodin reaction, and also that the reaction may be observed in cases without localized suppurations. Although all his tests with diphtheria toxin were positive, he does not consider that bacterial proteins can alone produce the reaction, but that it

may be induced by other irritating substances introduced subcutaneously, if they are likewise of a chemotactic nature. He concludes by asserting that the iodinophilous substance in the leucocytes is a product of degeneration, that it originates in the leucocytes themselves and is not derived from any organ.

A Case of Myelogenic Leukemia. Death from Sudden Leukemic Infiltration of the Upper Air-passages. W. HIRSCHLAFF.—After two months of weakness in the feet, and general depression, the patient came to the hospital with an enormous tumor of the spleen, with deep grooves to be felt in the surface; proportion of reds to whites, 6 to 1, with large preponderance of polynucleated mature bone-marrow cells, giving place as death approached to others not fully matured; night sweats and evening temperature 38 to 39 C. The soft palate, tonsils and throat suddenly swelled with a whitish appearance, resembling a diphtheritic pseudomembrane, with death from suffocation, in a few hours. The bone marrow was a grayish red with numerous hemorrhagic foci, and here and there, a distinct pyoid structure. All the glandular organs were hypertrophied and small white tumors were found all through the kidneys, peritoneum, liver and spleen. The hypertrophied condition of the spleen was due entirely to infiltration with the bone-marrow cells.

Munchener Medicinische Wochenschrift, April 11.

Influence of Physical Exercise on Temperature in Health and Disease. F. PENSOLDT.—Further tests have confirmed the statements that a rise in the rectal temperature after an ordinary walk of an hour on level ground, indicates pathologic conditions. The subjects should rest half an hour beforehand and the temperature be taken at once after the walk. By this means the effect of exercise on tuberculous, anemic and convalescent persons can be determined and the precise point, in debilitated conditions, when health-promoting exercise becomes injurious overexertion.

Group Agglutination and the Behavior of the Bacillus Coli in Typhus. M. PFAUNDLER.—This is a study of the recently established fact that the indifferent normal serum of adults can agglutinate a whole series of pathogenic and other microbes, although strong concentrations may be needed to render them perceptible. The bacillus coli is agglutinated more strongly and frequently the older the person from whom the homologous serum is derived, which fact is probably due to some possibly slight morbid process in which the bacillus coli was involved. The group or family agglutinating property diminishes in proportion as the bacterial species differs from the species causing the infection, and is hence most marked in those most closely related to it; the bacillus coli in typhus; the vibrio Metschnikoff in cholera; the streptococcus in infection from the diplococcus lanceolatus. The curve of the agglutinating power is usually most pronounced with the bacillus producing the infection. The serum of a typhus patient agglutinates the bacillus coli in a much weaker dilution than nontypic serum. In Pfaundler's experience, in a fourth of the cases, the agglutination was more pronounced with the bacillus coli than with the bacillus typhi. This may be ascribed to a secondary complication by the bacillus coli, especially as clinical observation shows that the cases in which it occurs are mostly atypic. The close resemblance between these two species of bacteria, however, suggests that it is merely a group or family agglutinating property, which view is sustained by the existence of the phenomenon in cases and experiments in which secondary bacillus coli infection is positively excluded, and also by the fact that the curves rise and fall parallel to each other. The possibility of group agglutination imposes the necessity of caution that some relative of the actual infecting agent with a pronounced curve may not be mistaken for it, or that the location of the morbid process may not be incorrectly diagnosed, as when, for instance, the bacillus coli passes secondarily through the primarily affected intestinal wall into the bladder, or when the bacillus coli affects the blood so as to produce agglutination through lesions produced by some other primary infective agent, or even through a sound mucosa, as in Fraenkel's experiments with young dogs, which were fed typhus cultures per os until their blood possessed marked agglutinating power, although no indications of infection were observed at any time.

Extraction of Alexins from Leucocytes of Rabbits, by Means of Blood Serum from Other Animals. P. LASCHTSCHENKO.—This depends on a vital process and demonstrates the intimate connection between the bactericidal properties of the blood and the leucocytes. The effusion following the injection of aleuronate broth in the thorax or abdomen of rabbits and dogs is centrifugalized, and the sediment of leucocytes, rinsed with inactive rabbit serum, centrifugalizing again, until every trace of the fluid of the effusion is removed. The final sediment thus obtained, consisting of living rabbit leucocytes, is mixed with the blood sera of various animals and kept for two hours at a temperature of 37 C., when the leucocytes are centrifugalized out. The fluid remaining, containing the alexins produced by the leucocytes, the "extract," possesses enormous bactericidal power, destroying millions of microbes, especially the staphylococcus, in four to eight hours.

Treatment of Ozena with Citric Acid. HAMM.—After cleansing the nose citric acid is insufflated through a powder blower three times a day, mixed with saccharum lactis āā. All odor is dispelled at once, and sometimes for several days. The psychic effect of this thorough deodorization improves the general health, and the cure of the ozena may follow. Hamm has had several cases under observation for months, with no recurrence, although he makes no claim for the citric acid except its remarkable deodorant properties.

Wiener Klinische Wochenschrift, April 13.

Influence of Changes in Lumen of Vessels and in Blood-Pressure on Number of Leucocytes. A. DECASTELLO and H. CZINNER.—The writers announce as the result of much experimental research that strong irritation of sensory nerves (ischiadicus), produces a decrease in the number of leucocytes in the blood, owing to the reflex contraction of the abdominal vessels and retention of the leucocytes in them. It does not occur if the splanchnicus is divided. Direct irritation of the vasoconstrictors of a circumscribed region diminishes the number of leucocytes in the blood issuing from it. Ingestion of vasoconstricting substances (suprarenal extract) produces the same effect in a higher degree. The effect of shock is due to the same process. Dilatation of the vessels, as after dividing the splanchnicus, has no influence on the number of leucocytes. A lowered blood-pressure diminishes the number of leucocytes temporarily. The above effects were attained in a maximum of three to four minutes. The variations amounted to 20 to 30 per cent.

Multiple Cysticercosis. From Rokitansky's Clinic.—Over eight pages are devoted to a study of this subject and observation of a case of multiple cysticercus tumors under the skin, accompanied by epileptic seizures, in a young man who at one time had been in the habit of eating raw pork. Numbers of the tumors were excised as they appeared and the "hook wreath" found in them. A tenia solium was also evacuated. There is probably a tumor of the same kind in the cortex, which causes the epilepsy. The possibility of these tumors should be borne in mind in doubtful cases throughout the entire domain of internal medicine. A few of the tumors spontaneously subsided.

Annales de Dermatologie et de Syphiliographie (Paris), February-March.

Eczema Seborrheicum. C. AUDRY.—This affection, neither an eczema nor a seborrhea, Aubry describes as an autonomous, circumscribed disease of the skin, inoculable and contagious, chronic in that it is liable to return again and again, probably specific and parasitic, with a regular, abnormal or complicated course. He endorses sulphur as the specific remedy, combined with zinc oxid, boric acid, etc., as indicated.

Tardy Monosymptomatic Heredo-syphilis. BARTHELEMY.—A syphilitic father and healthy mother have two healthy children. A third seemed also healthy in every respect, until her 21st year, when a typic tertiary gangrenous gumma of the skin appeared. . . . Fournier and Besnier reported observations of women presenting syphilitic manifestations for the first time twenty odd years after their marriage with a syphilitic and the birth of healthy children: "cases of extraordinarily tardy conceptional syphilis." This possibility should be borne in mind in diagnosing doubtful lesions in women who have conceived, especially tumors of the breast. Besnier inclines to the opinion that a woman who has conceived from a syphilitic is syphilized, and urges study of this subject to determine whether such women can later acquire primary syphilis, which would settle the question. . . . The interval before marriage allowable to a syphilitic is being lengthened. Fournier says: "The later the better." "After three to five, still better six, years devoted to systematic treatment, the subject may marry and prove harmless to his descendants."

Presse Medicale (Paris), April 5.

Osmotic Pressure and Its Applications to Medicine. H. VAQUEZ AND F. BOUSQUET.—In this review of our present knowledge of the laws of osmosis and their significance in pathology and therapeutics, the writers observe that it would be interesting and useful if all the research on the determination of the toxicity of the urine could be gone over again, with a view to osmosis. "It is accepted now that digestion commences and progresses under the constant influence of the difference between the osmotic force of the stomachal fluid and the plasma of the blood." "The blood, the lymph and the fluids

of the tissues possess an osmotic tension increasing from the former to the latter. The intermediate fluid aspirates the lymph, which in turn attracts the blood, thus producing a vital circulus founded solely on physico-chemic phenomena and regulated by the differences in the osmotic tension between the various fluids of the organism, and regulating the conditions of nutrition and of the organic secretions." The molecular concentration of the serum, determined by cryoscopy or observation of the freezing-point, which is the simplest standard for the osmosis, is normally —0.56, but it varies in certain conditions. In one case noted it was —0.71, and in a case of chronic nephritis, —1.04. Physiologic salt solution, to be isotonic in these cases, would have to be respectively 11.9 and 17.3 per 1000. A weaker dilution would affect them as pure water or a concentration less than 5 per 1000 affects normal subjects. . . . The chief task of the kidneys is to maintain the blood at a certain composition. It is therefore possible to draw conclusions in regard to the modifications occurring in the blood from modifications in the composition of the urine (vide JOURNAL, p. 900). Recent research by Winter, Dreser and Koranyi has established the possibility of determining in this way the relative amount of NaCl in the blood, the rapidity of the sanguine circulation in the kidney and a more exact knowledge of the mechanism of the secretion of the urine. A lower freezing-point for the urine indicates renal impermeability and comparing the variations from the normal freezing-point of the blood (—0.56), and of the urine (—1.50 and —2), solves various pathologic problems. Koranyi asserts that the latter figure remains the same while the former rises, in cases of affections of the heart with commencing insufficiency. This may prove a valuable means of differentiating urinary troubles due to mere disturbances in the circulation, from those connected with a renal lesion. Another important result of the study of osmosis is the realization of the necessity of using liquids in treating wounds, etc., which, combined with the capillary attraction of the dressings, establish an osmotic current outward. Further research is needed in this direction.

Revue de Chirurgie (Paris), April 10.

Metatarsalgia and Its Treatment by Resection of the Metatarsal Heads. M. PERAIRE and F. MALLY.—The writers transfer "Morton's neuralgia" from the domain of medicine to that of surgery, claiming that radiography has proved the affection to be a "condensing osteitis," a fact unsuspected before. Seven observations are related and radiographed. Patients who had for years been unable to walk or to put their feet on the floor without agony, were entirely cured by the resection of the painful metatarsal heads.

Polyadenomata of the Large Intestine. QUENU and LANDEL.—Forty cases are recorded in literature and reviewed in this communication, with two personal, in which the intestines were the seat of numerous adenomata from the size of a pea to that of a pigeon's egg, sessile or pediculated, consisting of the hypertrophied glands of the intestinal mucosa and connective tissue, with or without a cylindric epithelium. The coexistence of one or more cancers in nearly half the cases is a noteworthy fact. They do not appear until long after the first symptoms of the "polyposis," as the Germans call it, and a number of the polypi may undergo cancerous degeneration. The adenomatous structure and the epitheliomatous are frequently observed in a single neoplasm. More than half the cases were under 31 and four under 16; the majority males. The three chief symptoms are a peculiar, obstinate, persistent diarrhea with blood and mucus in the discharges, unaffected by medication; hemorrhages and pain, although the latter may be absent. The polyposis should incline the question of surgical intervention on the cancer toward the negative, and even if there is no cancer, operations through the anus have only afforded temporary results. The polyposis sometimes involves the entire intestines and the stomach, but the point brought out in this review is that it is essentially an affection of the large intestine, and irradiates from the rectum toward the cecum. The conclusion follows that sequestration of the cecum and diversion of the course of the fecal matters is the route by which to seek to improve the conditions and even possibly cure the polyposis.

Revue Generale d'Ophthalmologie (Paris), March 31.

Retrochoroidal Hemorrhages After Extraction of Cataract. S. BLOOM.—Micro-anatomic study of four cases establishes that these hemorrhages are due to local alterations of the walls of the veins of the choroid from phlebitis or periphlebitis, and that the rupture occurs during some transient exaggeration of the intravascular pressure.

Retinitis Albuminurica Gravidarum. AXENFELD.—The writer does not consider it necessary to terminate the pregnancy for this affection unless the sight is less than one sixth of normal. He also advises against the prevention of future conceptions on this account, as it does not necessarily recur with other pregnancies.

Zinc in the Eye. VOLLERT.—The prognosis of perforating wounds of the eye with fragments of zinc, calls for much reserve. This metal stands between silver and lead in respect to its phlogogenic properties, and in one case he followed, produced an inflammatory exudation around the foreign body with sclerosis of the vitreous body and retinitis. The retina atrophies in all its layers.

St. Petersburger Medicinische Wochenschrift, April 8.

Fibroma Molluscum. — In a case recently exhibited at the local medical society, the extent and size of the tumors constantly increased from above downward, with patches of pigment. E. V. Bergmann called attention to the pigmented patch, which under the microscope is seen to be a neurofibroma, the same as the rest macroscopically, in this affection, which is essentially a disease of the nerves, although the nerves produce no symptoms clinically. Nerve branches enter the tumors, twisting and spreading like the vessels in an angioma. Some of the tumors, especially on the neck, consist of nothing but nerves, as can be determined with osmic acid.

Societies.

COMING MEETINGS.

American Association of Genito-Urinary Surgeons, Niagara Falls, N. Y., May 25.
American Climatological Association, New York City, May 9.
American Laryngological Association, Chicago, May 22-24.
American Medico-Psychological Association, New York City, May 23.
American Orthopedic Association, New York City, May 16.
Arkansas Medical Society, Little Rock, May.
Association of American Physicians, Washington, D. C., May 24.
Connecticut Medical Society, Hartford, May 24.
Illinois State Medical Society, Cairo, May 16-18.
International Association of Railway Surgeons, Richmond, Va., May.
Kansas Medical Society, Topeka, May.
Kentucky State Medical Society, Louisville, May 16.
Louisiana State Medical Society, New Orleans, May 16-18.
Montana, Medical Association of, Butte, May 24.
Nebraska State Medical Society, Lincoln, May 9-12.
New Hampshire Medical Society, Concord, May 25-26.
New Mexico Medical Society, Albuquerque, May.
North Carolina, Medical Society of State of, Asheville, May.
North Dakota State Medical Society, Fargo, May 24-25.
Ohio State Medical Society, Springfield, May 10-12.
Ohio State Pediatric Society, Springfield, May 9.
Oklahoma Territory Medical Society, Oklahoma City, May 19.
Pennsylvania, Medical Society of State of, Johnstown, May 16.
Washington State Medical Society, Tacoma, May.
West Virginia, Medical Society of State of, Weston, May.

Marshall County Medical Society.—This society held a business session at Plymouth, Ind., recently, and elected the following officers: President, L. Johnson; vice-president, N. B. Aspinall; secretary and treasurer, J. H. Wilson.

Wells County Medical Association.—At the recent annual meeting of this association, held at Bluffton, Ind., officers were chosen for the ensuing year, as follows: President, I. N. Hatfield; vice president, L. A. Spaulding; secretary, S. A. Shoemaker; treasurer, C. L. Blue.

The American Laryngological Association.—This association will hold its twentieth annual meeting in Chicago, May 22, 23 and 24. Dr. W. E. Casselberry, Chicago, is president, and Dr. H. L. Swain of New Haven, Conn., secretary. All interested in laryngology are invited to attend.

Cumberland County Medical Society.—This society held its annual meeting at Bridgeton, N. J., April 11. Officers for the ensuing year were elected as follows: President, Ellsmore Stites; vice-president, Frank M. Bateman; treasurer, Jos. Tomlinson; secretary, Hamilton Mailly; censors, H. H. Oliver, Wm. L. Newall, H. W. Elmer, J. C. Applegate and Eph. Bateman.

Medical Association of Alabama.—At the annual session of this association, just closed at Mobile, the following officers were elected: President, J. O. LeGrande, Birmingham; junior vice-president, Samuel G. Gay, Selma; censors, E. H. Sholl, Bir-

mingham, and Glenn Andrews, Montgomery; orator, Rhett Goode, Mobile. The next meeting will be at Montgomery.

Alumni Society of Sloane Maternity Hospital.—At the annual dinner of this society, New York City, April 28, the following officers were elected; president, George L. Broadhead; first vice-president, A. Ernest Gallant; second vice-president, Eugene Coleman Savidge; recording secretary, James D. Voorhees; corresponding secretary, Frank R. Oastler; treasurer, Edwin Sternberger; pathologist, James Ewing.

Congress of American Physicians and Surgeons.—At a recent meeting of the executive committee of the congress, the following officers were elected: President, H. P. Bowditch, Boston; secretary, W. H. Carmalt, New Haven, Conn.; treasurer, Newton M. Shaffer, New York City; chairman of executive committee, Landon Carter Gray, New York City; secretary of executive committee, W. K. Simpson, New York City. The next congress will meet at Washington, D. C., in May, 1900.

Northampton County Medical Society.—At the eleventh annual session of this society, Easton, Pa., April 21, the following were chosen officers for the ensuing year: President, Charles McIntyre, Easton; first vice-president, J. O. Berlin, Bath; second vice-president, D. H. Keller, Bangor; recording secretary, F. H. Erwin, Bethlehem; corresponding secretary, H. T. Edwards, South Bethlehem; treasurer, Amos Seip, Easton; censors, H. T. Lacair, Bethlehem, S. S. Aple, Easton, and A. A. Seem, Bangor.

Florida State Medical Association.—The twenty-sixth annual meeting of this association has just closed at Jacksonville, Fla. A large number of papers were presented by prominent practitioners of the State and, by invitation, papers by Drs. John B. Roberts and John B. Deaver of Philadelphia. The election of officers resulted as follows: President, J. H. Hodges, Gainesville; first vice-president, W. L. Huklett, Cocoa; second vice-president, G. W. Lamar, Quincy; secretary and treasurer, J. D. Fernandez, Jacksonville; librarian, J. Y. Porter, Key West. The next meeting of the association will be held at Orlando in April, 1900.

Mississippi State Medical Association.—In his presidential address, Dr. Kendrick advocated the establishment of a museum to which the members should contribute specimens and matters of medical interest. He also advocated the election of all members of the State board of health by the medical association, as, until the code of 1892 was adopted, the association selected all the members of the board except two, while now it selects only five out of twelve. He thinks this would be a powerful factor in stamping out and keeping out quacks and irregular practitioners, there being now nothing to prevent the governor from appointing a majority of irregular doctors on the board.

Detroit Academy of Medicine.—At the meeting held April 25, Hal. C. Wyman, read a paper on "Gall-Stone Surgery." These stones have their origin in an irritative process occurring in the gall-bladder due to a reflux of bile from the duodenum to the bladder, with the consequent disturbance of equilibrium in the bile elements. Hence the stone should first be sought in the gall-bladder, and later in the ducts. If the stone is in any of the ducts, it should, when possible, be pushed back into the bladder before the passages are open. The paper reviewed the methods used by the writer; his experience and methods were not materially different from other operators. Recurrences are more frequent than is generally supposed. To prevent these a change of diet is essential. Corn, rice, oats, fats, fruits, hot and cold distilled water, and fruits without sugar will be a useful preventive diet.

Wayne County Medical Society.—At the regular meeting, held at Detroit, April 20, Dr. A. J. Burdeno read a paper on "The Tongue in Disease." The tongue, he said, may be looked upon as one of the barometers of the body. We note its color, whether it is flabby, teeth-indented, dry or moist, and whether or not it is normal in motion and appearance. Partial coating may come from a carious tooth, from an enlarged tonsil, or possibly from a neuralgia of one of the branches of the facial nerve. When the tongue is entirely coated, there being no elevation of the patient's temperature, but existing constipation, the disturbance is in the alimentary tract, as a rule, and a calomel or podophyllin purge is indicated according to color of stool. These may be combined with hyoscyamus or belladonna and ipecac. Should these measures not clear up the tongue, we may consider the case one of impaired nutrition and an indication for the use of mineral and vegetable tonics. The tremulous tongue of typhoid fever is an indication of deep ulceration of Peyer's glands. The dry tongue of fever, when entirely involved, indicates nervous depression and may be due to sleeplessness. For this condition Dover's powder has given excellent results. The dry tongue is also said to be an indication for the exhibition of stimulants. If alcoholic stimulants are administered and the tongue becomes moist, the stimulant is to be continued, but if the tongue becomes more coated and more dry, alcohol should be replaced by digitalis or strophanthus and nux vomica. In advanced cases of diabetes the tongue is dry, clean and glazed. The dry tongue of old people may not indicate as great seriousness as in the young. The dry, smooth, glazed tongue of typhoid fever calls for the administration of turpentin. Other conditions of the tongue discussed by the author were the irritable tongue of dyspepsia and phthisis where extensive intestinal ulceration exists and in some cases of chronic alcoholism; the broad, pale, flabby tongue of atonic and anemic conditions, Bright's disease, and other chronic diseases; the swollen tongue, due to salivation; the tongue slightly coated and frothy at the edges in neurasthenia; the hemiatrophied tongue of locomotor ataxia; partially or wholly paralyzed tongue of hemiplegia or other paralyses, and the cold tongue of collapse.

Association of American Medical Colleges.—The next annual meeting of this association will be held in the Senate Chamber, Columbus, Ohio, June 5, 1899. The morning session, to be devoted to the discussion of educational matters, will be called to order at 10 o'clock. The secretary will, however, be in attendance an hour earlier to register members and transact routine business. The judicial council will be in session at the same time. The program will be:

1. Elective Ccurse in Medical Schools. Prof. J. M. Dodson, Junior Dean, Rush Medical College, Chicago.

2. Condition of Medical Education in the South. Prof. G. C. Savage, University of Nashville, Nashville, Tenn.

The afternoon session will be the business session, and follow the order of business prescribed by the by-laws:

1. Reading the minutes of the previous meeting.
2. Roll call of membership.
3. Reports of committees.

a. Report of the committee on the condition of medical colleges in the United States. E. Fletcher Ingals, chairman.

This committee was appointed under the following resolution:

Resolved, That a committee of three be appointed to ascertain the amount of work being done by the various colleges, members of this association, and to offer such amendments to the constitution as may seem fit for consideration and action, at the next meeting.

The members of the committee are the chairman, E. Fletcher Ingals, Prof. John C. Oliver of Cincinnati, and Prof. Thos. H. Hawkins of Denver.

b. Reports of special committees.

4. Secretary and treasurer's report.
5. Report of judicial council.
6. New business.

Under "new business" will come up the consideration of proposed amendments to the constitution.

7. Adjournment.

Medical Association of Georgia.*

Annual Meeting held at Macon, April 19-21, 1899.

ELIMINATION AND ANTISEPTIC TREATMENT OF TYPHOID FEVER.

Dr. T. VIRGIL HUBBARD of Atlanta presented a paper on this subject, and said that while there may be some room for justly criticizing the size of the dose and frequency of administration, advocated by Dr. Woodbridge, there can be no doubt that to him belongs the honor of having combined a number of drugs for the treatment of typhoid fever, which, if systematically and continuously used, will reduce the mortality of this disease. While the author has used the same drugs, but in larger doses, and not so frequently administered, he is not prepared to say that his method of administration is not the better, for he has never used it that way, and he is not willing to criticize the Woodbridge plan before having tried it. The most conspicuous and pronounced opponents of the antiseptic and eliminative treatment of typhoid fever are almost without exception those men who have never systematically used it in even a limited number of cases, thus placing themselves in the absurd position of condemning this treatment without ever having given it a fair trial. A number of physicians will testify to the remarkable tolerance of the system to mercury, when under the influence of the poison of diphtheria, some having given as high as 300 grains of calomel in one week to an adult with diphtheria, without producing salivation or violent purgation. He would not attempt to offer any explanation of why this is so, but the fact remains. He has given a half grain of calomel to a typhoid patient every two hours for forty eight hours without producing salivation or purgation. While the same tolerance does not exist in typhoid fever that syphilis and diphtheria furnish, yet it does not seem unreasonable to assume that there is some physiologic antagonism between the disease and mercury, which may account, to a certain extent, for its controlling influence. The treatment the author has used, as suggested to him by Dr. Stockard of Atlanta, consists in the administration of the following; Calomel, 0.5 grain; guaiacol carbonate, 2 grains; podophllyin, $\frac{1}{20}$ grain; given in one capsule every two hours for twenty four to forty eight hours, depending on the condition of the bowels. He continues this until he has secured four or five intestinal evacuations for two successive days, and then he leaves off the calomel and adds half a grain of menthol to the guaiacol and podophyllin. If, after discontinuing the calomel, there is any tendency of the bowels to become inactive, he administers a small dose of salts or Hundyadi water in the morning. He always endeavors to secure at least two or more evacuations, daily, depending on the temperature and tympanites. If, after four or five days of treatment, the temperature remains high or rises after having remained stationary, he again resorts to the calomel as above, for twenty-four hours, and it invariably reduces the temperature and results in a general improvement in the patient's condition. He continues the administration of the guaiacol, menthol and podophyllin throughout the disease.

Regarding the variation in size of dose and frequency of administration of the calomel, the common sense and good judgment of the physician must be relied on for the successful administration of this treatment. Timidity or skepticism on the part of a physician will too often result in failure, but the continuous and apparently heroic administration in the beginning of treatment is the *sine qua non*, and will invariably be rewarded by a favorable modification of the course and symptoms of typhoid fever.

With reference to diet and the general hygiene of the sick-room, typhoid patients can retain, digest and assimilate a larger amount of nourishing food with this treatment than with any other. The author is in favor of giving more food to typhoid patients than has been the custom heretofore.

INFANT FEEDING IN HEALTH AND DISEASE.

Dr. GILLHAM P. ROBINSON of Atlanta followed with this paper. The proper suggestions for infant feeding and the rules governing substitute food should emanate from the medical profession rather than from the non medical proprietors of commercial foods. The position occupied by the physician in comparison with that of the venders of patent foods is a very humiliating one and should no longer exist. He would not condemn the use of all commercial foods, as some of them are useful for children who have passed their first year, but what he condemns is the pernicious use of these foods by the profession simply because they may have agreed with some individual children, or because some old nurse advises it. The commercial foods are far from being reliable, and all of them, even when containing the percentages of fats and proteids claimed for them by their owners, may have these constituents reduced below the limits of nutrition, when properly diluted, for infant feeding. Physicians should refuse to be dictated to by proprietors of so-called infant foods, or by old nurses. They should think for themselves, prepare the food scientifically, be on the watch for improvement, and, above all, hold self-respect. He has no fear of the result when modified milk is used with care and accuracy.

SEVEN CASES OF DIPHTHERITIC CROUP, TWO ABORTED BY ANTITOXIN, AND FIVE CURED BY ANTITOXIN AND INTUBATION.

Dr. R. M. HARBIN of Rome drew the following conclusions from his paper on this subject:

1. Numerous statistics prove that antitoxin has lessened the mortality of diphtheria one half.
2. The remedy is never toxic in its effects, and never causes or increases albuminuria, if properly used, and does not interfere with the use of other remedies.
3. The dose of antitoxin in laryngeal cases should be from 1500 to 4000 units, according to the age and condition of the patient.
4. In weak, anemic and albuminuric cases, its administration should be more guarded, as the restraining effect on the kidneys, as in one of his cases, may be due to a faulty administration.
5. Antitoxin favors resolution of the membranes in cases subjected to intubation, lessening the absorption of toxins and rendering an early removal of the tube safe.
6. Antitoxin has a favorable effect on the mixed infections.
7. From a personal observation of three successful out of five tracheotomies and five consecutive successful intubations for croup, his preference is for intubation, except in rare cases.

ENDOSCOPIC TREATMENT OF CHRONIC URETHRITIS.

Dr. W. L. CHAMPION of Atlanta, in a paper on this subject, presented a few facts relative to the treatment of this disease, which he hoped would result in the more general use of the endoscope. A careful study of the lesions of chronic urethritis, through the endoscope, will convince the most skeptic of the value of direct local treatment in these conditions. A large percentage of inflamed urethras remain uncured for months, and frequently years, when the proper endoscopic treatment would perfect a speedy cure. After several years' use of the endoscope in treating these conditions, it has been the author's good fortune to relieve many, if not from pain, from the mental anxiety produced on account of a chronic urethral discharge, or the probability of a stricture in the near future. It is only after careful study and some experience with the use of the endoscope that the various pathologic conditions can be recognized.

In chronic urethritis, not due to cicatricial stricture, his experience has been that in the majority of cases the seat of inflammation is in the middle urethra, or, more properly speaking, the lower part of the spongy portion. That the spongy portion of the canal is more frequently involved than the membranous or prostatic there can be no doubt, but he is convinced that in every case of chronic urethritis, the posterior urethra is more or less involved. This can be demonstrated by taking a patient with a few ounces of urine in his bladder, whose urethra is inflamed and bladder is not involved, and irrigating the anterior urethra thoroughly, then have the patient pass his urine in a glass, when shreds or filaments will be invariably noticed. The endoscope should not be used when the urethra is acutely inflamed, or so long as the urine appears cloudy from an abundance of mucus. The number of cases that respond to endoscopic treatment after other means have failed certainly demonstrate the value of the endoscope.

SOME FACTS IN REGARD TO THE MEDICAL COMPLICATIONS, SEQUELÆ AND TREATMENT OF TYPHOID FEVER.

Dr. H. A. HARE of Philadelphia contributed an address (by invitation) bearing this title, and it was read by Dr. Hurt in the absence of the author.

Dr. Hare shows conclusively that there is a decrease in the frequency and in the mortality of typhoid fever all over the world, which decrease is probably due to improved sanitation and a better knowledge of the methods which should be employed in the treatment of the malady. He protests against the use of the cold plunge bath in every case of typhoid fever which comes into the physician's hands, on the ground that routine treatment is never rational, and, 2, because a certain proportion of patients present contraindications to its use, which are absolute, and a still larger class can be treated by properly modified hydrotherapy, with excellent results. In making this latter statement he is well aware that he is doing a dangerous thing, because a number of men, eminent in the

*Abstract of Proceedings.

medical profession, have given their support to the universal employment of the cold bath, and because there is a possibility that his own position in this matter may be misunderstood. In other words, a careless hearer might think that because he does not use the bath in every case, he does not use it in any case. This is exactly the opposite of the view which he wishes to take. As firmly as he believes that the plunge-bath is not for everyone, so does he believe that in some cases it is the best and only thing which can be employed with advantage. He insists that while the mortality of the disease has decreased independently of such treatment, hydrotherapy has saved a great number of lives, and, if properly employed, will continue to do so. The important points for the physician to decide when treating any case of disease are the remedy which is needed and its dose. In the opinion of those who have the largest experience, hydrotherapy is needed in every case of typhoid, and with this view the writer most heartily concurs. When it comes to the question of dosage, his point of view differs from that of some others; he believes that the mode of applying cold should be varied to the needs of the individual patient, and he has yet to see a case in which he has regretted the employment of the modified plunge-bath. What, then, are the modifications? The use of cold applied to the body of the patient, who is stripped, and who lies upon his bed, while the nurse gives him the necessary friction and massage. The water is to be varied in its temperature according to the persistency and degree of the fever. If the patient suffers from marked hyperesthesia of the skin, so that the cold and the rubbing make him actually wretched, the first so called sponggings may be made with water at 70 degrees; later on, ice water may be employed, or, if the fever is high and persistent, a piece of ice may be rubbed over the body instead of the use of water. In other words, the dose of cold varies with the needs of the individual. It is of vital importance that the nurse who employs this modified bath treatment should be trained to her duties.

During the past three months he has had fifty-eight cases of typhoid fever under his care, every one of which has required hydrotherapy; in only two has the persistency of the fever necessitated the use of the cold plunge, and in both of these, by a curious coincidence, hemorrhage from the bowel at once occurred. Almost without exception the temperature under the use of this form of cold falls from 2 to 4 and 6, or even 8 degrees, proving two points: 1, that if this form of cold is properly applied, it reduces the temperature satisfactorily and produces a good reaction; 2, if such a fall of temperature can be produced by mild means, why should we resort to the labor, the exhaustion, and the excessive effect of the actual plunge. He is firmly of the belief that the actual rubbing which accompanies the use of cold in the way he has described is of great advantage to the patient, because he believes that a gentle massage given to the patients suffering from typhoid fever, and who are practically taking the rest cure, is an exceedingly useful thing for the maintenance of health, and because by these frictions reaction is increased, and, as has been proved by Popischil, friction increases the loss of heat 80 per cent., and the loss of moisture through the skin, according to Weisroch, 50 per cent.

Dr. Hare next directed attention to a number of variations in the character of typhoid fever, which are apt to lead to late or erroneous diagnoses. He also dwelt upon temperature variations from the usual in onset.

The differential diagnosis is necessarily difficult in the early stages of the disease, although in general Jaccoud would have us believe that it is easy. It must depend largely on the absence of any history of malarial exposure, on complete development of most of the characteristic signs of typhoid fever, and, finally, on the absence of any signs of the malarial organism in the blood and the presence of the Widal reaction. In the well-developed stage of the disease variations from the usual temperature course are very frequently met with.

Two cases of apyretic typhoid fever have been recorded by Wendland. These were confirmed by autopsies and illustrate that temperature is not a true index of the severity of the disease.

With reference to typho-malarial fever, a subject about which great diversity of opinion exists, at the present time it may be asserted that a separate disease entity of this character does not exist, and this is done on the basis that recent discoveries in the natural history of these diseases, particularly the recognition of the malarial germ on the one hand and the Widal test on the other, has enabled us to make an absolute diagnosis in cases in which so positive a statement has heretofore been impossible. On the other hand, there is no doubt whatever that pure typhoid infection may result in the production of fever which closely follows the remittent malarial types, and is often associated with so much gastric disturbance and vomiting, and so lacking in the more prominent typhoid symptoms usually seen that the picture of remittent malarial fever is clear, while the true picture of typhoid fever is clouded.

SOME OF THE FALLACIES IN THE MODERN TREATMENT OF NOSE AND THROAT DISEASES.

Dr. DUNBAR ROY of Atlanta presented this subject. By fallacies he means the false recognition of pathologic conditions, and the wrong remedy for the condition when it is recognized. As to the use of sprays, they are exceedingly valuable in a large number of cases, but the indiscriminate use of them in every case that consults a physician is sometimes harmful and often injurious. There is such a thing as the spray habit, just as we find the cocain and morphin habits. This is brought about largely by specialists, who consider that it is necessary for patients to come to their offices every day or every other day and be "sprayed out," until it not only becomes a habit with the patient, but a mercenary habit with the physician. A spraying out makes the patient feel temporarily better, and in one whose nasal chambers have been closed, the sensation on opening up is delightful, but, unfortunately, there is a reaction and the opened condition does not last. Time has shown him the fallacy of much spraying.

There are two fallacies connected with the use of nasal sprays, which exist with undue frequency among rhinologists: 1. The pressure used in atomizing the liquids is frequently too strong, and the result is that the mucous membrane is injured through such traumatism, and therefore injury instead of benefit is the result. The mucous membrane in the nose is tender and sensitive, although it is sometimes sorely tried and withstands the onslaughts of many odoriferous particles, and for this reason the force of any spray should be well regulated. Some cases require a stronger spray than others, as, for instance, in atrophic rhinitis, where irritation of the mucous membrane is considered by some as the rational therapy. 2. It has become almost a universal habit to use some oily product as the base of spray medicaments in contradistinction to watery sprays formerly used, and this, too, done as a habit without proper discrimination. He holds that spraying of the nasal chamber is never justifiable unless there is a catarrhal discharge from the membrane, readily recognized on anterior rhinoscopic examination, or where there is an accumulation of mucus coming from the contiguous cavities, such as the frontal or ethmoidal sinus or the maxillary antrum.

The electrocautery is an exceedingly useful instrument in the domain of rhinology and laryngology, but like sprays it has been abused. In his earlier practice he used the electrocautery ten times where he now uses it once. Its great service in the nose is for the reduction of true hypertrophy of the membrane covering the turbinates, when this latter is pouring off an unhealthy discharge, or is so blocking the lumen of the nasal cavities as to prevent the passage of air thoroughly through the same.

Another error frequently committed is the removal of cartilaginous spurs and exostoses or bony spurs from the nasal septum. With more ripened experience he finds that fewer spurs should be removed from the septum, and only in those cases where other well recognized methods of treatment have been used and failed. His reasons for this are that after a spur has been removed from the nasal septum, one is obliged to have scar tissue as the result, and this will always give the patient a point where mucus and scabs will gather, to the constant annoyance of the patient, proving sometimes more annoying than the slight obstruction itself. Close discrimination and the knowledge of when to operate should be the aim of every physician, be he specialist or not.

There are fallacies in medicine of two kinds: 1, that which is the result of ignorance from the lack of previous training and study; 2, that which comes from making a snap diagnosis without minutely studying the case. Both classes are guilty, and in the long run the beneficent public will find out the physician upon whom they may depend.

MITRAL STENOSIS.

Dr. M. F. CARSON of Griffin, in a paper on this subject, pointed out that when one examines a well-marked case of this disease he notices, on inspection, that the apex-beat of the heart is in its normal situation, the meaning of this being that the left ventricle is not enlarged, although it may be diminished in size. This depends upon the fact that its work is lessened, owing to the auricle not being able to discharge so much blood into it as it does in health. But this only applies to cases of pure mitral constriction. In mitral regurgitation the auricle, which is overfilled at great pressure by the blood poured into it through the mitral orifice, discharges its contents again into the left ventricle with accumulated force, as soon as the ventricle ceases to contract and the latter hypertrophies to

meet the abnormal strain. The author next referred to palpation, percussion and auscultation in the diagnosis of this disease, and divided the course of the disease into two periods; that of good compensation and that of bad, failing compensation.

The first and most essential point in the treatment of heart failure in cases of valvular disease is rest. The patient should be put to bed. This measure of itself sometimes gives excellent results. If venous congestion is very great, bleeding should be resorted to in mitral stenosis. Digitalis still holds the foremost place where the pulse is rapid, feeble and irregular, and in many cases its effects are very striking. The author believes it is useless to give this drug with a slow pulse, that is, where the pulse is beating at a rate which is normal to the individual in question, or below normal. If, while we add to the power of each contraction of the heart, we diminish the number of beats per minute, unless, indeed, when we begin to give digitalis the heart-beats are abnormally hurried as well as feeble, under such circumstances digitalis sometimes fails. Strophanthus may then be tried, but the latter drug is far less frequently effectual than digitalis. Digitalis may be combined with strychnin. Another favorite drug with the author, if the urine be scanty, is citrate of caffein. Abundant simple food in small quantities, often repeated, is most essential in the successful treatment of this condition.

THERAPEUTIC VALUE OF HYPNOTISM.

Dr. JOHN R. ROSE of Eastman read a paper on this subject, which will appear in a later issue of the JOURNAL.

OPERATION FOR VARICOSE VEINS.

Dr. WILLIS F. WESTMORELAND of Atlanta demonstrated the technic of an operation for this condition. The object of the removal of these veins is simply to force the finest blood-current through the deeper veins. A number of methods have been suggested for this purpose, but the majority of them do not accomplish what the surgeon has in mind. In correcting or removing varicose veins, if the surgeon does not restore the circulation, if the blood-current is not sent back through the deeper veins, the condition for which the operation is undertaken is not corrected. The anomalous veins of the lower extremities are so great and frequent that he knows of no work on anatomy which deals with the anomalies that the surgeon encounters. The operation he proposes has for its object to send the circulation to the deeper femoral veins and the complete removal of the internal saphenous vein. If this vein is taken out completely, circulation through the deeper vessels would be restored. This operation is attended with no more danger than any of the other simpler operations that have been suggested. The length of the incision depends upon the length of the patient's leg. If the surgeon ligates all branches individually, it is a tedious procedure, and Dr. Westmoreland showed by colored drawings the method of clamping the individual veins instead of making double ligation.

CATARRHAL LARYNGITIS.

Dr. H. R. SLACK of LaGrange read a paper on this subject, to appear in full in the JOURNAL.

SURGICAL TREATMENT OF EMPYEMA.

Dr. W. S. ELKIN of Atlanta considered this topic. The surgical treatment of empyema will depend upon the condition of the patient, the amount of pus present, and the pathologic condition of the lung at the time of operation, and consists of thoracentesis, thoracotomy, and thoracoplasty. The objects to be attained are the removal of the pus and the obliteration of the pus cavity by the safest and most perfect plan. Prompt surgical interference is just as imperative in these diseases as in lumbar, pelvic, and liver abscesses or pus in the peritoneal cavity. Thoracentesis is not in itself a surgical procedure that cures empyema, but a valuable and indispensable means of determining the presence of pus and improving temporarily the condition of the patient before thoracotomy is done.

The author presented a patient he had operated on at the Grady Hospital about six months ago, Estlander's operation as modified by Schede, and gave a full history of the case as taken from the hospital records. Thirty-eight ounces of thick, yellow, greenish pus were obtained from the right pleural cavity, July 16, 1898, and July 17, he aspirated below and to the outer side of the other puncture, removing 33 oz. of thick, greenish-yellow pus; July 18, 55 oz.; July 19, the same amount; July 20, 38 oz.; July 27, 22 oz. A total of 241 ounces was aspirated in twelve days. In the operation, portions of the ribs on the right side, from the second to the ninth inclusive, were removed, amounting to a total of thirty-six inches of rib, with excellent result.

CANCER OF THE BREAST.

Dr. SAMUEL LLOYD of New York contributed this paper: He has for many years declined to accept the embryonic cell theory as a satisfactory explanation for the cause of this disease, and it has been, to his mind, a strong argument in favor of some infectious element, that cancer should be on the increase. Locality seems to have a decided influence in the production of the disease, and some years ago he collected considerable data bearing on this point (editorial in *Annals of Surgery*), and there has recently been an article on the same subject, embodying the results of later investigations, in several numbers of the *Centralblatt für Chirurgie*. Perhaps more startling than this clinical experience, however, is the almost simultaneous announcement from the new York State Laboratory, from Dr. Armand Ruffer's laboratory, and from Dr. Bra of Paris, that they have discovered certain bodies in cancer cells which seem to be distinctive of the disease. More surprising still are the results of Bra, for he has advanced further than the other observers. In six personal observations, which increases the total to twenty-two cases of cancer of the uterus, mamma, ovary or rectum, or with epithelioma of the tongue or cervix, in which these parasites have been noted in the blood, he has succeeded in injecting animals with cultures of this fungus, derived from human cancer, in producing tumors with the typic structure of fibrosarcoma and carcinoma.

From the time he began to operate he performed the Volkmann operation, and he has one patient, operated on in 1885, who lived seven years without recurrence, and died of pneumonia in 1892. After Heidenhain's paper he made it a habit to remove the whole of the pectoralis major, except the clavicular portion, and, following the papers by Halsted and Meyer, he extended this to complete removal of the pectoralis major and the other structures advocated by those operators. He has one patient, the only one he can trace, who is now in the tenth year of freedom from recurrence following the incomplete removal of the pectoralis major. Within the past few years the importance of the complete or radical operation has been forced upon him more strongly than ever. It is frequently the case that the axillary lymphatics do not seem to be involved, and yet after the pectoralis minor has been cut through and the infraclavicular glands and fat exposed, it is very evident that they were infiltrated. In these cases any operation short of a careful exposure of the whole infraclavicular region would have left definite areas of infection, and this probably accounts for the number of cases where it is observed that the recurcence came just under the clavicle.

Every tumor of the breast should be removed as soon as possible, and time should not be wasted in vain attempts to absorb it. If there is reason to believe that the growth is benign, it may be cut into first, and then the operator may determine whether it is suspicious or not. But every suspicious tumor of the breast should lead to a complete extirpation of the breast at once. Age is no protection from cancer, and we should not forget that it may appear in early as well as in late life. Dr. Lloyd has operated for cancer, and the pathologic report has sustained the diagnosis, in a woman of 26, and in several between that age and 30.

RIGHTS AND WRONGS OF THE MEDICAL WITNESS IN COURTS OF JUSTICE.

Dr. JAMES B. BAIRD of Atlanta presented a paper on this subject, which will appear in the JOURNAL.

MOUTH-BREATHING.

Dr. JAMES M. CRAWFORD of Atlanta read a paper and reported a case of this condition, the paper to appear in full in the JOURNAL.

COLD IN TREATMENT OF PNEUMONIA.

Dr. J. D. HERRMAN of Eastman, in his paper, pointed out that cold has been applied in the treatment of this disease by the Germans for a long time, and chiefly in the hospitals of this country. The cold must be applied continuously and persistently. Ice must be broken in pieces small enough to be put into a rubber bag with a small mouth; the ice bag, wrapped in a towel, is placed against the affected area, and is changed if the disease extends. The length of time that ice should remain is governed entirely by the wave of the temperature; if this fall to or near the normal point, the ice should be removed and again be applied should there be a tendency to elevation of temperature. The ice not only reduces the temperature, but checks the further spread of pulmonary congestion. He has reason to believe that it produces resolution in areas which are in the stage of exudation. He considers no age a bar to its use if the temperature warrants it. Next to ice, strychnia and digitalis are probably of the greatest importance. Ice has no injurious effect on patients with pneumonia. He has had good results from this mode of treatment for the past few years.

SYMPOSIUM ON ANESTHESIA.

CRAWFORD W. LONG AND HIS DISCOVERY.

Dr. LOUIS H. JONES, of Atlanta, in his paper in this symposium, stated that on March 30, 1842, Dr. Long administered ether to a young white man, named James M. Venable, for the purpose of excising a small tumor located on the back of his neck. The ether was given until the patient became insensible, and was continued during the operation, the patient showing no sign of pain, and after regaining consciousness refused to believe that the tumor had been removed until it was shown to him. A month or two later a second tumor was removed from the neck of the same patient, ether being again administered, but being discontinued after the patient became anesthetized and before the operation began. On this occasion Venable stated that he felt slight pain as the last cut was being made. The essayist read a copy from Dr. Long's journal of charges against James M. Venable for medical services, which we give below, and then cited Dr. Marion Sims, writing on this subject in the *Virginia Medical Monthly* (May, 1878), showing the work of the early co-laborers in this field.

James Venable to *Dr. C. W. Long*, Dr.

1842.

Jan. 28, sulphuric ether	$ .25
March 30, sulphuric ether and exsecting tumor	2.00
May 13, sulphuric ether	.25
June 6, exsecting tumor	2.00
Total	$4.50

PHYSIOLOGY OF ETHER ANESTHESIA.

Dr. J. B. MORGAN of Augusta, in his paper, said he knew of no cause of death from ether during the primary stage of anesthesia, but if the vapor be inhaled in a too concentrated form, there is usually in the beginning a momentary arrest of respiration and a decided sense of suffocation, evidently the result of the irritant action of the vapor upon the mucous membranes of the upper air-passages. In regard to the physiology of ether anesthesia, two conclusions are well established:

1. That the vapor of ether is dissolved in the blood of the pulmonary capillaries; it is then carried to the left side of the heart, and from there finds its way through the circulation to every part of the system.

2. That ether affects the nerve centers: 1, the cerebrum, then the sensory centers of the cord, next the motor centers of the cord, then the sensory centers of the medulla oblongata, and finally the motor centers of the medulla.

(To be continued.)

Medical and Chirurgical Faculty of Maryland.

Centennial Meeting held at Baltimore, Md., April 25–28, 1899.

About one thousand physicians registered at this meeting, and the additions to membership were over two hundred. The festival character of the occasion was quite as conspicuous as the literary. The exercises opened with a dinner at the Maryland Club, given by Dr. William Osler to the president, the trustees, and Mr. W. F. Frick, the founder of the Frick Library.

The Governor of Maryland opened the session in formal words, alluding in the course of his remarks to several of the most noted medical men of Maryland, and especially to Dr. Upton Scot of Annapolis, for sixty years a physician of large means in Annapolis and the first president of the faculty; to Dr. James McHenry, who was Washington's surgeon-in-chief during the Revolutionary War and later his secretary of war, the founder of West Point, and after whom Fort McHenry is named; to Prof. Nathan R. Smith, "the Emperor," the great surgeon of Maryland from 1827 to 1877.

PRESIDENT'S ANNUAL ADDRESS.

Dr. SAMUEL CLAGGET CHEW in his address reviewed the events of the century since 1799, when, on June 3, at Annapolis, the medical and surgical faculty of Maryland, in accordance with an act of the Legislature passed at the preceding session, met and organized. He also passed in review the discovery of vaccination, first introduced into Baltimore by Dr. John Crawford in the summer of 1800, of ether and chloroform, of Bright's disease, of the bacteria of disease. "The proper work of medical science," said he in concluding, "in connection with its sister sciences, biology, chemistry and electricity, is to study diseases and the application of remedies, and it is for that end that the faculty is striving."

Following the address a lunch was served in the hall.

On Wednesday morning Professor KEIRLE, of the College of Physicians and Surgeons, gave a demonstration of the Pasteur methods in the diagnosis and treatment of rabies.

He was followed by Professor Welch of Johns Hopkins, who gave demonstrations of the principal forms of diseased organs and tissues and of the various pathogenic bacteria.

CEREBROSPINAL MENINGITIS.

Dr. WILLIAM OSLER showed cases of this affection, which he calls an "American disease." He pointed out that it prevails especially in country districts, and the descriptions given of it by country physicians have been particularly good. Two events of prime importance in connection with the recent history of the disease are the discovery of the parasite and of the value of lumbar puncture. The latter has a decided value in treatment and to some extent in diagnosis. The method of puncture was illustrated, the needle of the aspirator being introduced between the third and fourth lumbar vertebræ. If the serum is the least turbid it indicates inflammation; this is by far the most important element in the diagnosis. The fluid should be received in a sterilized vessel and cover-slips made for examination. The meningococcus is usually easily demonstrated. Chloroform is not often necessary. In coma, puncture has great value. It is perfectly harmless. It is an important point to enter the canal low enough. The speaker dwelt on the suddenness of the attack, persons being often attacked while at work or, if a child, at play. Herpes is quite significant, being more frequent than in any other affection. The retention of intelligence is an important feature. Leucocytosis is always present. Cerebral features characterize tuberculous meningitis, spinal and cerebrospinal meningitis; seventeen cases have been treated in the hospital during the present epidemic, with six deaths.

RECENT RESEARCHES ON MALARIA.

Dr. THAYER considered this subject, especially as to Italy and India. Inoculation with blood is always followed by the development of the disease and always of the same type. Laveran advanced the theory of mosquital origin. An example of insect production of disease is seen in Texas fever in cattle. The parasite has been found in the ticks. It is impossible to trace the complete cycle in the plasmodium malariæ—impossible to cultivate the organism outside the body. There are three types of parasites, some only of which give rise to flagellæ. The nature of these flagellæ is in dispute, but they seem to be concerned with the sexual functions of the organism and its reproduction. It was suggested that they might represent one of the sexual forms. McCallum of Baltimore has shown that only those forms fecundated by flagellæ can produce malaria. Ross's striking experiments in India were related.

In Italy investigators are all getting around to the idea of mosquital origin. Circumstances all favor the idea. Grassi narrowed the question down to two forms of mosquitoes. He experimented with one form especially (*the anoptele claviger*), and with it followed out the complete cycle of development in the walls of the mosquito's stomach. The proof is to be accepted with little reserve. We must now acknowledge that one individual affected may be the means of infecting others, and thus the disease is indirectly communicable. Is this the only mode of conveyance? The Italians are very strong in the belief that it is, and analogy renders this view exceedingly probable.

CANCER OF BREAST.

Dr. HALSTED next exhibited some dozen cases of radical cure of cancer of the breast, the women being operated on at periods varying from three to ten years. All the cases are kept under observation and frequently seen or corresponded with. Notwithstanding the removal of the pectoral muscles (one or both), the movement of the arm was almost perfect. Skin grafting (always from the thigh) is now done in every case, and the grafts always take. In four cases the glands of the neck were involved; in two of these the patients are still living and well after five years. Sometimes the cicatrix involves the anterior axillary fold, interfering with the free motion of the arm; this is remedied by simply incising the fold and transplanting fresh skin into it.

HERNIA.

Dr. HALSTEAD also showed a number of cases of hernia radically operated on; 500 cases have been operated on in the last ten years, 400 being inguinal. Ten years ago inguinal hernia was thought to be incurable. In almost every case it can now be cured without danger to the testicle. The success is due to the implantation of muscle in the ring, the latter being lined throughout with muscle. Surgeons all over the world are now realizing the importance of lining all wounds made in the abdominal walls with muscle. About one hundred and

fifty cases are now operated on at the Johns Hopkins in a year, sometimes several in one day. One remarkable case shown was that of an old man of 84, operated on last summer for double inguinal hernia. Halsted uses a protective silver foil in dressing his wounds, and there is never any suppuration in them.

GYNECOLOGIC EXAMINATIONS.

Dr. HOWARD A. KELLY followed with a gynecologic clinic in which he demonstrated by means of the electric light and mirror, methods of examining the rectum and female bladder for purposes of diagnosis and treatment. Dr. Kelly used specula of greater or less length, through which the surface of the organs could be as plainly seen as that of the hand held before the eye. He also showed how simple it was to catheterize the ureter. He claimed that these instrumental means were available to the general practitioner and should be used in every case of disease of the lower bowel, bladder and ureter.

SOME LANDMARKS IN THE HISTORY OF OPHTHALMOLOGY.

Dr. HERMANN KNAPP of New York presented a paper on this subject. His remarks were directed to Young's discovery of the mechanism of accommodation of the eye, made about 1805, the scientific adjustment of glasses, the ophthalmoscope, and antiseptics as applied to eye diseases and operations.

DEBT OF THE PUBLIC TO THE PROFESSION.

Dr. W. W. KEEN of Philadelphia presented this oration, showing what medical science had done to arrest the ravages of disease and epidemics. In most telling figures and terms, he brought into successive review the plague and Haffkine's preventive inoculations; cholera and yellow fever and the sanitary reforms which had shorn them of so much of their terrors; scurvy, almost a lost disease; typhus fever, of which he declared he had never seen a case; typhoid fever, still deadly in its blight because the public will not listen to the voice of sanitary physicians; smallpox, diphtheria, tuberculosis, hydrophobia, trichinosis, anesthetics and antiseptic surgery. Dr. Keen's conclusion was magnificent. "I would," he said, "that some great artist might paint a picture of the conquerors in medicine, as Fritel has painted the conquerors in war. Instead of spectral hills and a barren waste, the scene should be laid in a smiling valley. The stately procession should be led by Edward Jenner. He should be flanked by Joseph Lister and John C. Warren, followed by Simpson, Billroth, Livingstone, Ambroise Paré, Virchow, John Hunter, and many a modest but unknown hero who has yielded up his spirit in the performance of his duty. Instead of treading their way through lines of corpses, as do the great warriors of the world, they should march between lines of grateful men and women and a host of God's little children, who, on bended knee and with clasped hands, would reverently invoke Heaven's richest benediction upon their deliverers. Thus should humanity recognize its debt to the medical profession."

EUROPEAN MEDICINE ABOUT 1799.

Dr. A. JACOBI of New York spoke of the physicians and medicine of the last century, and traced the gradual rise in the social position of the physician, who, in consequence of the progress of science and the spread of Protestantism, gradually assumed the place of the priest and became the confessor of the family, the adviser of the commonwealth. Obedience to him was natural, sometimes absolute. What was formerly done or attempted by individuals will hereafter, he said, be accomplished by societies and institutions.

CANCER AS A PARASITIC DISEASE.

Dr. ROSWELL PARK of Buffalo, in a paper on this subject, declared his abhorrence of the parasitic theory. He thought that the matter of etiology would soon be settled and as in tuberculosis and other affections, with the knowledge of the cause would come a knowledge of cure. The death-rate of cancer in all civilized countries is constantly increasing. He referred to the view held by some that the disease depends on the use of uncooked vegetables, as diet. The question whether the disease be local or general is all important. He referred to the importance of collective investigation of it, as is now being made in Paris, London, and in New York State; in the last an appropriation has been made by the authorities, for the purpose. The origin of cancer is, he said, now a purely biologic question.

NOSTRUMS.

Dr. H. C. WOOD of Philadelphia, presented a paper on this subject, which may be read in full, in the JOURNAL, April 29, p. 908.

Dr. Clotworthy Birnie of Tarrytown, Md., was chosen president for the ensuing year, and on motion of Dr. Wm. Osler, a committee was appointed to raise funds for a new building and for the endowment of the Library. The latter has now between 14,000 and 15,000 volumes.

Medical Society of the State of Tennessee.*

Sixty-sixth Annual Meeting, Nashville, April 11-13, 1899.

Governor MCMILLAN, in an address of welcome, thought it much better to practice on the dead than on the living. He is not in sympathy with those who think it terrible not to bury the paupers, whom charity has kept alive for many years, who have no friends, and live at public expense, die at public expense, and are left without burial, except at public expense, but believes it better that the bodies of such individuals be turned over to the medical profession for study. Before the society adjourned a bill became a State law providing that the unclaimed bodies of paupers should be turned over to the medical profession.

SUBCUTANEOUS RUPTURE OF LARGE ARTERIES FROM CONTUSED WOUNDS.

Dr. J. A. CROOK of Jackson presented this paper, which is to appear in the JOURNAL.

GUNSHOT WOUND OF HEAD.

Dr. T. L. LANIER of Portland reported this case in a negro boy, caused by a bullet from a small pistol passing from the child's forehead to the region of the parietal bone near the back part of the head. After trephining, some spicules of bone were removed and the wound irrigated with bichlorid solution, 1:4000. Notwithstanding the operation was long delayed and the patient was at one time thought to be dead, the little fellow completely recovered. He is able to do manual work, although there is still complete paralysis of the right arm.

GUNSHOT WOUNDS OF ABDOMEN.

Dr. R. DOUGLAS of Nashville reported seven cases of gunshot wounds and one stab-wound of the abdomen, in which the number of perforations varied from two to nine. Many of the cases were very irregular in symptomatology; in three there was only a small bullet-wound in the anterior surface of the abdomen, without shock, constitutional symptoms, pain or vomiting. He makes it a rule, after ascertaining that there has been penetration of the abdomen, to make an abdominal section. Neither the location of the wound nor the size of the missile can give assurance that there is not perforation or hemorrhage. Six of the seven cases recovered. He attributes his success largely to the time of operation, which was in every instance under five hours after the receipt of the injury; also to the promptness with which the shock was treated on the table. The bleeding points were immediately sought for and an intravenous injection of salt solution given. Dr. Douglas prefers wiping out the abdominal cavity to the use of irrigation.

PRACTICAL SUGGESTION REGARDING AMPUTATION OF FOOT.

Dr. JERE L. CROOK of Jackson, instead of following the classic amputations described in the text-books, such as Hey's Lisfranc's, LeFort's, Miculicz', Chopart's, Pirogoff's, Syme's, etc., believes that the operator should keep in mind the following ideas and purposes: 1, to save every bit of tissue possible; 2, to treat the foot as a whole; 3, to make the bone sections wherever sufficient soft tissue can be secured to cover the severed ends. The blood-supply of the flaps should be borne in mind. Many secondary amputations have been necessitated by failure to regard circulatory anatomy in the sweeps of the knife. The object of the paper was to induce the younger operators to not occupy their minds so much with the technic of the various classic amputations of the foot, but rather to pay attention to the salvation of as much of the foot as possible.

Dr. DUNCAN EVE of Nashville commended the conservatism of the paper, but could not agree with the recommendation to make an amputation of the foot without regard to the articulations, treating it as one bone, as suggested by the essayist.

VESICAL CALCULUS IN WOMEN.

Dr. T. J. HAPPEL of Trenton presented a paper on this subject, printed in this issue of the JOURNAL, p. 969.

UNIQUE CASE OF GUNSHOT WOUND OF ABDOMEN.

Dr. R. E. FORT of Nashville reported a case where a 32 caliber pistol ball had entered the left iliac region about two inches above a point midway between the crest and anterior superior spinous process of the ilium. There was considerable shock, subnormal temperature, pulse 100, extremities cold and a board-like rigidity of the abdominal muscles on the left side. The abdomen was opened in the median line, revealing slight hemorrhage and fecal matter in the abdominal cavity. Two wounds of the small intestine were found about six inches apart, which were repaired by purse-string sutures, reinforced by peritoneal Lembert sutures. In the sigmoid flexure there was a small wound of the mesentery on one side. By introducing a small

*Abstract of Proceedings.

silver probe it was found to enter the caliber of the gut in the "deadly mesenteric" space. It being impossible to continue the operation through the median incision alone, a crucial incision was made to the wound of entrance in the abdominal wall. A longitudinal incision of the mesentery was made, in the middle of which was the mesenteric wound. The mesenteric fold was separated from the gut. Here a longitudinal wound was found, about three-fourths of an inch in length. This was closed by Lembert sutures, and the mesenteric wound closed with intestinal silk. The wound of exit was looked for, but without success. The author believed the ball had lodged in the caliber of the gut and gave instructions to save the feces, but when the order was given, three hours after operation, the patient had already had two large evacuations which had been thrown away, and it was not afterward found. The patient made a good recovery, being discharged well on the sixtieth day.

FUSIFORM ANEURYSM.

Dr. R. E. FORT also reported a case with a sixteen years history of syphilis, with a fusiform aneurysm of the right femoral artery in Scarpa's triangle, which had appeared ten months before. The tumor measured 10.5 by 7.5 inches. An incision was made from an inch within the anterior superior spinous process of the ilium, and an inch above Poupart's ligament, inward four inches, dividing the skin, fascia of the external oblique, fibers of the internal oblique and transversalis muscles, coming down to the transversalis fascia, which was picked up by tissue forceps, nicked and divided by blunt pointed scissors; pushing the peritoneum backward, the iliac fossa was exposed. After removing some enlarged lymphatic glands and adipose tissue, the artery and vein were exposed, the sheath was opened, and by blunt dissection with the handle of the knife, assisted by teasing with the aneurysm needle, a double No. 11 braided silk ligature was passed and tied, and the wound closed. The entire leg and foot were thickly wrapped in crude cotton and a loose bandage applied; hot-water bags and a fifteen-pound bag of shot were placed on the tumor. Collateral circulation was promptly established, and pain vanished; the tumor has diminished two-thirds in size and the patient is out of danger.

Philadelphia Neurological Society.

Meeting held April 24, 1899.

ANOMIA.

Dr. CHARLES K. MILLS, in presenting a case of anomia made some remarks on the naming center. The patient was a male, aged 69, and for the past several years had been an inmate of the Philadelphia Hospital's department for the insane. He had been examined a few weeks ago and anomia found present. There was no disorder of hearing nor vision, and he was able to make proper use of the parts of speech except nouns. The interesting feature of the case is that he is unable to connect the proper name to the object. On asking him his name he replies correctly "Joseph Penny." On being requested to state his age he replies "Penny-Penny Penny." Asked to name certain objects, as a tin box, leather purse, apple, he can not do so, but on being requested to write the names of these objects does so correctly. On being blindfolded and asked to smell an apple and then requested to name it, he replies "an orange." On being given a newspaper and then requested to point to certain words, as dollars, life, 2 per cent., he does so correctly, but on being asked to give the letters in the word "fed," he says "I, three, three, four." Asked if the first letter is a, b, or c, he says "no"; asked if the first letter is f, he replies "yes." The only letters he can not name correctly are w, x, and y. He has good command of verbs and prepositions. The loss of power to name objects is called by the Germans "optic aphasia," which, according to Dr. Mills, is incorrect. "Tractile aphasia" is also an incorrect term. Cases similar to this one suffer from hemianopsia. This patient is neither word blind nor object-blind. The condition arises from the separateness of a concept center; or a condition resulting from separation of fibers from the concept center on their way to Broca's convolution. The symptoms point to these fibers being intercepted.

MULTIPLE NEURITIS FROM MERCURIAL POISONING.

Dr. JOHN K. MITCHELL presented the patient, a man of middle life, not addicted to drink or excessive use of tobacco, and without a history which would lead one to believe that the condition originated in any other manner than from the following cause: In March, 1896, being afflicted with vermin, he applied to the body two ounces of mercurial ointment, followed two days later by a similar amount. A few days afterward violent abdominal pain ensued, accompanied by a watery diarrhea, but with no symptoms of salivation. At the end of five weeks from the onset of these symptoms he was examined, and it was found that there was considerable tenderness along the nerve trunks of the forearm, accompanied by atrophy. There was complete loss of common sensation. The hands were contracted; both wrist and ankle drop were present. The skin of the soles of the feet and the palms of the hands was very dry. Several months after the poisoning occurred a peculiar bluish area developed in the region of the forehead, and has persisted until this time. This blue area is almost in the center of the forehead, somewhat oval in outline, and probably two to three inches in diameter. The treatment in the case consisted in confinement to bed for several weeks, with subsequent application of the galvanic current and massage. The reflexes have entirely recovered and there is no atrophy.

TREMOR DUE TO HYSTERIA.

Dr. CHARLES W. BURR presented a woman about 25 years of age, who eight years ago began to suffer from tremor, at that time confined to the right hand. The tremor is now general, and worse in the head. Four years ago she was operated on on both sides of the neck in the region of the spinal accessory nerve. The mental state is good and she is able to do general housework. The fields of vision are in good order, and there is no history of hysteric palsies. There are no hysteric zones. While the patient is at work the tremor is not apparent, but if startled by a sudden noise or strange face, the tremor is so violent as to compel her to drop any object she may at the time be carrying. The case is doubtless functional in origin, or in other words, hysteric.

Cincinnati Academy of Medicine.

Regular Meeting, April 17, 1899.

PITYRIASIS RUBRA PILARIS; ITS ANATOMY AND PATHOLOGY.

Dr. A. RAVOGLI gave a clinical description of a case which had presented itself at the clinic of the Ohio Medical College. The patient was a woman, 45 years old, Russian by birth, married and the mother of twelve children. On Aug. 4, 1898, while suffering from a slight general indisposition, she noticed pruritis and burning of the palms of the hands and soles of the feet. This was soon followed by a follicular eruption, involving extremities, face and body and predisposing the extensor surfaces over the flexor. The character of the early eruption was redness and undue prominence of the follicles of the skin, and was what he termed the primary or follicular type of the disease. Later there was a tendency for the redness to diffuse over large areas, for the skin to become thickened, indurated and covered with a furfuraceous desquamation, and for the folds and furrows of the skin to become unduly prominent. This stage he called the psoriatic type of the affection. The hairy surfaces became affected with pityriasis, and there was loss of hair from the scalp, eyebrows, eyelashes, axilla, pubes, and from the surface of the body in general. The palms of the hands and the soles of the feet became affected with a very extensive form of hyperkeratosis, and deep and painful rhagades or fissures formed over these areas. The eruption continued to spread until at the present time nearly the entire surface of the body is affected with the psoriatic type of the eruption. Small surfaces which were latest involved still show a follicular type. Small areas of about the size of a dime are scattered here and there and still show a normal condition of the skin. Pruritus was very marked and the entire surface of the body was covered with excoriations from scratching. Loss of weight and malaise and distress are associated.

Dr. M. L. HEIDINGSFELD followed with a pathologic demonstration of the case, illustrated with sixty microphotographs and lantern slides. He also gave a pathologic demonstration of a case of lichen ruber and showed essential differences between these diseases, refuting the opinion of Kaposi that these two diseases are one and the same pathologic entity. He showed pityriasis rubra pilaris to be essentially a disease of the hair follicles with hyperkeratinization about the hairs and within the follicles; the follicles were often lifted from their beds and extruded upon the surface of the skin covered with only the stratum corneum; cellular infiltration was limited to the subpapillary layer and mostly around the capillaries, the papillæ being entirely free. Elastic fibers were present in excess in the subpapillary layer of the corium, for the most part around the greatly hypertrophied arrectores pilorum. In lichen ruber, the pathologic process is papular, there being a very extensive infiltration of usually four or five adjacent papillæ. The subpapillary layer was not infiltrated; the elastic fibers were present in excess throughout the entire corium, and extended as a fine mesh-work into the tips of the papillæ.

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SATURDAY, MAY 6, 1899.

INTESTINAL IMPLANTATION OF URETERS.

Sequential to earlier publications, MAYDL of Prague records five new cases of implantation of the ureters into the flexura coli for the relief of ectopia vesicæ, in all of which cases union was secured without complications. The result in each instance is noteworthy, in that the urine is retainable in the rectum for eight hours by day, and that at night the five individuals thus operated on enjoy ten hours of unbroken sleep.

ALBERT, ROUX, SIMON, HOLMES, LLOYD, BOARI, HERCZEL, RYDYGIER, TROMBETTI, ROSENOTTI and FRANK likewise announce the successful issue of cases operated by MAYDL'S method, and KRYNSKI, VIGNONI, PISANI and FOWLER have all made successful rectal implantations, each by his own method. Transplantation of the ureters for the cure of exstrophy of the bladder is by no means a new method, but one to which experimentation upon animals and clinical research have lately called renewed attention. In lower animals the operation has almost invariably been followed by morbid changes in the kidneys, which have produced death.

In the JOURNAL of January 28, Dr. FRANKLIN H. MARTIN reported thirty-four rectal implantations in dogs, with four recoveries, and in the March number of the *Am. Gyn. and Obstet. Jour.* he reported three cases of intestinal implantation of the ureters of dogs, each case ending more or less promptly in *exitus letalis*. It appears from MARTIN'S report that, in the first series, he employed his original method of burying the ureters between the rectal muscular coats for one inch before their penetration of the mucosa, and that in the second series the ureters were cut square across and inserted at random through a simple incision in the intestine. At any rate, MAYDL'S precautionary step of implanting a flange of the bladder-wall, with the ureter, was omitted. Up to the date of MAYDL'S recent publication, his method had been practiced by himself and his followers fourteen times, with two deaths from pyelonephritis. MAYDL believes that the ascending intestinal infection of the two fatal cases might have been avoided, to a mathematic certainty, had he, instead of cutting the ureter square across, excised from the bladder an elliptic piece of its wall—*bas fond*—and implanted this into the intestine as a flange upon the end of the ureter. The purulent and necrotic processes which may accompany the wound healing, would thus not involve the ureteral orifice nor the tissue in its immediate vicinity, but would be found upon the edge of the flange. It is plain that stricture of the ureter and ascent of bacteria would be less likely to occur after application of MAYDL'S amended method, for the reason that the peculiar relations of the ureter to the bladder muscularis are not disturbed, the ureter and that part of the bladder through which it courses being removed together and intact.

MONCLAIRE and TIZZONI, seeking even more assiduously to ward off intestinal infection of the kidney, modified MAYDL'S operation by dividing the flexura sigmoidea from the rectum, drawing down the flexura to the sphincter ani, and sewing it in the anterior rectal wall—thus emptying the ureters into a segment of bowel where fecal matter would hardly present itself. This laborious procedure seems superfluous, in view of MAYDL'S statement that no death has followed the application of his more simple method as recently perfected.

MAYDL'S record is indisputably good, but we predict that a somewhat longer series of successes than that which he has recorded will be required to convince American surgeons that no considerable danger of ascending pyelonephritis accompanies his operation. The method is one of complicated technic. It involves invasion of the cavum peritonei and could not be consistently employed except by one skilled to an unusual degree in plastic surgery of the abdomen.

It has been shown, moreover, that there develops in all cases of rectal implantation a more or less severe proctitis. It is known too that continence of urine is not always permanent after the operation. In view of these things it might be well to keep in mind, at least, pending the establishment of the MAYDL operation, the simpler if less brilliant procedure originally suggested by SONNENBERG of Berlin, in 1882, and which of late has been receiving fresh attention. SONNENBERG'S operation consists simply in loosening the ureters from the exstrophied bladder wall, drawing them down, and inserting them into the tip of the glans penis. The operation has now been

made about twelve times with no deaths. After this operation a urinal must be worn, but the soiling of the clothing and the misery of the drenching with urine are ended. The depending penis fits securely in the neck of the urinal and all the urine may be caught both by day, when the patient goes about, and at night, when the recumbent posture is assumed. One of the most active nurses in SONNENBERG'S clinic is a man on whom this operation was made sixteen years ago.

Until some more satisfactory method for the relief of this dread condition is developed SONNENBERG'S suggestions may well be considered by those selecting an operation for the relief of ectopia vesicæ.

RECENT OBSERVATIONS ON THE ACTION OF THE BACILLUS AEROGENOUS CAPSULATUS.

In 1892 WELCH and NUTTALL described a gas-forming bacillus (bacillus aerogenous capsulatus), which they obtained from emphysematous tissues and blood of a man who died of aneurysm of the aorta. Gas bubbles were present in the internal organs, especially in the heart's flesh, liver, spleen, and kidneys. This gas burned with a pale bluish, almost colorless flame, ignition causing a slight detonation. Microscopic examination showed masses of bacilli, some degenerative changes, including disappearance of the nuclei of the cells of some of the organs, especially in the neighborhood of the gas cavities, in the walls of which the bacilli were often quite numerous.

Since their description a number of interesting reports, bearing upon the action of this organism in the living as well as in the dead tissues, have appeared (DUNHAM, NORRIS and others.) In their original paper WELCH and NUTTALL suggested that many of the deaths attributed to air embolism might prove to be cases of invasion of the gas bacillus. They referred especially to those cases of air embolism which have been reported as due to the entrance of air into the uterine sinuses during pregnancy and parturition. It will be recalled that there have been described not a few cases of uterine air embolism apparently caused by efforts at producing abortion by means of injection of fluid into the uterus, often with faulty syringes. Not long ago PERKINS[1] reported a case in which death apparently resulted from air embolism after an attempt at criminal abortion. It was found on studying sections of the uterus in this case, that the tissue presented the characteristic lesions of gas bacillus invasion, together with the presence of bacilli which corresponded in morphology and staining qualities to the bacillus aerogenous capsulatus (DOBLIN).

Very recently REULING and HERRING[2] described an instance of gas cysts in the brain tissue, due without much question to the preagonal or post-mortem invasion of this bacillus. While changes due to this organism, or very closely related bacteria, have been described in almost every organ of the body, this seems to be one of the two first instances in which changes due to this organism have been recognized in the brain. The authors believe that in all likelihood such cases must have occurred before this one, but they have been explained on different grounds. As probable examples of such lesions they refer to the two brains described by SAVAGE and HALE WHITE, in an article entitled "Cases of Holes in the Brain." (Vol. xxxiv of Transactions of the London Pathological Society.) These brains were obtained from two general paralytics, and as the kidneys, liver, lungs, and heart muscle contained cysts, they refer to the changes with the term of "universal cystic degeneration." The illustration of one of the brains, accompanying their article, is stated by REULING and HERRING to present a picture almost identic with that of the brain reported by them. It appears also that the cysts in the other organs were very probably due to the action of gas-producing organisms.

It seems, therefore, probable, as emphasized by WELCH, that certain cases in the literature described as holes in the brain are really due to the post-mortem development of the gas bacillus.

The bacillus aerogenous capsulatus not infrequently produces local emphysema in the living tissues, from which recovery takes place. In one case described by FRAENKEL, local emphysema followed hypodermic injection, and death occurred two days afterward.

In the same number of the *Bulletin of the Johns Hopkins Hospital* as that in which REULING and HERRING'S article appears, WM. T. HOWARD, JR., of Cleveland, Ohio, reports a fatal case (vide JOURNAL, May 6, p. 989, ¶ 11) of acute fibrinopurulent cerebrospinal meningitis, with abscesses of the cerebrum and gas cavities in the cerebrum in the cerebrospinal exudation, and in the liver, due to a bacillus identic in cultural and other peculiarities with the bacillus aerogenous capsulatus of WELCH and NUTTALL. This bacillus was cultivated in pure culture from all of the organs. At the autopsy one-half a cubic centimeter of the meningeal pus was injected into the ear vein of a rabbit, then the animal was killed, and the cadaver placed in the incubator. After five hours the body was enormously swollen, the subcutaneous tissue being emphysematous, and the autopsy revealed the bacillus in the heart, blood-vessels, and all the organs. Microscopic examination of the organs of the patient showed bacilli like the gas bacillus, and careful search failed to disclose the presence of any other bacteria. HOWARD therefore concluded that in this case it is evident that the necrotic and other lesions, such as the exudations into the brain and the meninges, as well as the gas cysts, were due to infection by the bacillus aerogenous capsulatus.

The fact that this organism can produce pus is well known. HOWARD believes that the presence of the

[1] Boston Med. and Surg. Journal, 1897.
[2] Bulletin of Johns Hopkins Hospital, Vol. 10, p. 62; Journal, May 6, p. 989, ¶ 10.

bacillus in such great numbers in the nervous system, as he demonstrated, and the relatively much smaller number in the blood-vessels and other organs, negatives the idea that this is an example of post-mortem invasion. The formation of gas cysts in the brain, the cerebrospinal exudate, and in the liver may probably be regarded as a post-mortem change. This case appears to be the first one in which this interesting bacillus has given rise to abscesses of the brain with meningitis.

HOWARD found, on comparing sections of a gas cyst of the brain from the case reported by REULING and HERRING with sections of his own case, that the appearances agreed in every respect. HOWARD'S case concerns a man 31 years old, who was operated on for urinary fistula following purulent infiltration into the perineum. Dr. ALLEN curetted the fistulous tract, which communicated with the urethra, inserted a catheter into the urethra, and allowed the wound to heal. A few days afterward the patient became unconscious, developed symptoms of meningitis, and soon died.

CAUSE AND THE REMEDY.

The motto of the JOURNAL is *Tros Tyriusque mihi nullo discrimine agetur*, and its policy is to publish whatever can be of interest to the profession, so economic questions that have a bearing on its welfare fall readily into this category. It is understood, moreover, that the JOURNAL is not editorially responsible for utterances of its contributors. Its columns are open to all shades and differences of opinion that can be with propriety discussed in a publication of this kind. It does not come within the editorial function to repress views that are in any sense within the proper limits of legitimate medical discussion.

It sometimes happens, however, that, following this rule, an article is published that contains statements of theories or expresses views that, in our opinion, call for editorial comment.

In the present issue there appears an article on a question that interests us all: how to remedy the financial evils from which so many of us suffer, and the author finds no relief except by practically abolishing the existing laws and institutions of society. He says: "Let every law pertaining to the settlement of disputes be wiped off our statute books and every question pertaining to the business or social relations be adjudicated by the cardinal principles of democracy, equal rights to all and special privileges to none. No other law is needed." If this view is accepted, if practical anarchy is the only remedy for existing evils, then the world is much worse off than has been thought even by those who are far from being optimists. All that has been gained in the social evolution of man is not to be thrown away because we have not reached perfection, and if present laws are not what they ought to be, the remedy is not in abolishing all law. If, as medical men, we suffer under present conditions, we need not wish to overturn society to help matters. The world is overfull in spots, and it is the glory of our profession that by reducing the death-rate and increasing the expectancy of life we have possibly had our share in bringing this about.

Dr. REED asks: "Does not the world bring forth an abundance for all?" It does not, even now, do this in all regions or we should not hear of famines as we do, and with his remedy it would do so still less. Let his "eternal law of justice" prevail in the sense that all men have equal rights to everything, and the number of voluntary paupers would be infinitely increased. It is only hard necessity and law that makes us work. We do not work for pleasure, nor would we work at all but for the restriction of law, which prevents us from taking the means of living without work. This is a well-established fact, and we can not get around it, and the pessimism of the advanced socialists in regard to human institutions is all the more remarkable when considered in connection with their professed faith in human nature.

Our profession is also overfull, and this is not one of our glories or a matter of which to be proud, or upon which to congratulate ourselves. This fact is, indeed, the very fountain and origin of at least a large proportion of the evils that now afflict us. The medical profession in this country numbers about one to every 500 of the population generally, and the proportion is increasing. This is particularly the case in the great centers of population. We suffer directly from overcompetition, and in spite of this fact, which is patent to every one, we as a profession do everything in our power to increase the evil. Instead of making it more difficult to enter and crowd our ranks, as we might well do on scientific grounds alone, apart from any selfish or narrow considerations, we open and multiply the gates of entrance and let down the grades to make the professional ascent the easier. Every large city and many of the smaller ones are medical centers, the seats of one or more medical colleges, multiplying physicians. In one great medical center, it was shown two or three years ago that one in every five or six practicing physicians was some sort of a professor or instructor in a medical school, and it is safe to say that the number has not since decreased. Every year additional thousands of newfledged physicians are turned out of these multitudinous colleges to engage in the struggle for existence. Not every one can succeed under these conditions and some may cry for bread.

These general truths are not new; they are in the records of all times, but in our profession it may be said that they were never more felt than now. It is, nevertheless, our own fault to a very large extent. Our charity has begun and continued everywhere but at home. We establish dispensaries where even the

well-to-do learn to get treatment gratis; we multiply free hospitals, we entice into the study of medicine many who would far better succeed in other lines, and thus annually turn out a surplus of doctors to compete in an already overcrowded profession.

The remedy is largely in our own hands and it is not to our credit as a profession that it is unused. It is not by overturning society that we can right matters, not even if we pool our issues with every breeder of discontent in this or any other land. There will always be some unmerited failures and some hardships, but when our professional spirit rises above sacrificing the many for the few by multiplying small medical colleges for advertising purposes, we shall see the beginning of the end of some of the evils of which we now complain, and the Golden Rule can be followed under existing conditions even better than under anarchy, with every man's hand free to do whatever his imperfect ethic nature may suggest.

GEN. LEONARD WOOD.

The London correspondent of the *Medical News*, in his last communication, says that General WOOD is decidedly the popular hero in London, and the record he has made in Santiago is quoted as a brilliant illustration of the value of combined medical and military administrative talent in such a situation. The fact is gratifying to his countrymen, whose opinion of him, as far as it can be formed of one who has not yet finished his career, is the same as that of his English admirers. It is hoped that it may be very long before Dr. WOOD'S career is finished, and that our confrère will continue to reflect credit on his profession in whatever capacity he may be called upon to act.

COLORADO MEDICAL LEGISLATION.

The Colorado Medical Practice Act, which was noted in the JOURNAL of April 15 as having passed both branches of the legislature, was finally vetoed by the enlightened governor of that State. His objections to the bill in his feebly sarcastic veto message, as reported, are: that it admits "that the public health may be protected by three different systems of materia medica and therapeutics," that it makes the use of the title of "Dr." a misdemeanor even in D. D's., and veterinary surgeons; that it will not protect the public health, which is already good enough in Colorado, and, lastly, that nearly all advance in medicine has been made by physicians who were in opposition to their brethren—not by, "but notwithstanding the great body of its professors." The message reads as if it were written by a quack.

ACTIVE AND PASSIVE IMMUNITY TO ANTHRAX.

Having shown that sheep could be rendered immune to subcutaneous inoculation with virulent anthrax bacilli by previous treatment with blood-serum of infected animals, SOBERNHEIM (*Berliner Klin. Woch.*, March 27, p. 273) undertook to determine whether similar results could be obtained after spontaneous infection. The immunity conferred by treatment with the blood serum of immune animals or of those suffering from anthrax is both quickly acquired and quickly lost. Artificial protection would, therefore, be of use principally in the face of an epidemic. It was found, however, that this passive immunity could be combined advantageously with active immunity. With this object in view sheep were treated subcutaneously with a mixture of blood serum from infected animals and cultures of anthrax bacilli. The resulting infection was mild and the immunity considerable, the latter being still present a month and a half later. Further, the sheep were resistant not only to subcutaneous inoculation, but also to infection through the gastro-intestinal tract, the usual mode of infection under natural conditions. Similar results were obtained with animals treated with the blood serum of animals infected with anthrax.

SAND FILTRATION AND TYPHOID FEVER.

The majority of the informed and the thinking will agree with the *Philadelphia Record* in its statement "that there is enough knowledge already gleaned from past experience to clearly indicate that the true solution of the water problem in this city is to be found in sand filtration. The sooner this process (which is not patented) shall be adopted and put into operation the better. There is good reason to believe that the recent epidemic of typhoid fever, which has caused the loss of many lives, would have been avoided if sand filter-beds of sufficient capacity to purify the Schuylkill water had been put in operation before the beginning of the present year." In view of the facts it is difficult to understand how anyone having the welfare of the city and the interests of its people sincerely at heart could have deferred for an hour filtration of contaminated water-supply under the pretext of seeking information already in the possession of those who care to know. Statistics show that in several weeks the three most important causes of death in Philadelphia have been pneumonia, pulmonary tuberculosis and typhoid fever—all infectious diseases, transmissible more or less directly from the sick to the well. The remedies are two: 1, prevent the dissemination of the germs, through water, through air, through contact; and, 2, increase the individual resistance.

THE ILLINOIS MEDICAL LAW.

The new Illinois medical practice act that has just become a law is not in all respects what was desired or is desirable, but is certainly an improvement on what preceded it. The fact that a State examination is required from non-graduates of Illinois institutions is certainly an advance, though a somewhat halting one. It will be remembered that medical law reforms in Massachusetts started in a similar way, and that now that State is behind none in its scientific requirements for the practice of medicine. It is to be hoped that this is also only a first step in Illinois, where there are so many so-called medical colleges of vary-

ing grades of merit or demerit, but which have mostly at least managed to obtain recognition as institutions in good standing by the board of health. The raising of the standard of entrance requirements by the leading medical colleges has, as a contemporary (*Medicine*, February) remarks, made possible the existence of schools that are less exacting in these regards, and thus rendered possible the graduation of those whom the better colleges would not even admit, so that instead of there being an aggregate improvement there may be an actual deterioration in the average quality of the output of the medical schools. It is unfortunate that these inferior medical schools are thus favored by the new medical law. Much will depend on the State board of health and the courts in the efficient enforcement of the law, and it is to be hoped that these officials will so construe its provisions as to give the public as fair a measure as possible of the protection it needs.

X-RAY DANGERS.

A verdict of $10,000 has just been rendered against the owners and operators of the Roentgen X-Ray Laboratory in Chicago. The plaintiff had a stiff ankle, and a skiagraph was desired to ascertain the exact state of affairs in the joint. As a result of the examination, it was claimed, a necrosis ensued, requiring three separate amputations before the patient was entirely free from his trouble. It was held by the prosecution, and this view was evidently accepted by the jury, that the examination was improperly made, that the exposures were too long and that the subsequent disease of the limb was entirely the fault of the operators. Experts were employed by both sides and there was probably the usual conflict of testimony, so that, regarding any scientific disposition of the question, nothing practical will have been gained, and as the case will undoubtedly be appealed, its legal status is still in suspense. We already know that some inconvenient symptoms follow X-ray exposures occasionally, but we are very far from having found any constant law of these accidents, and the question of idiosyncrasy, which is only an admission of our ignorance, is always to be considered. Some people endure continued exposures to these rays without danger, others suffer, and this is about the extent of our knowledge. Experts for the prosecution ought, in such cases, it would seem, to be particularly guarded in the utterance of positive opinions or alleged statements of facts.

CONTAMINATION OF UNIFORMS IN THE AMERICAN ARMY.

Under the above title the *Lancet* (April 1) recalls the fact that twenty-one years ago it published the report of a commission on the contamination of uniforms provided by the Army Clothing Depot and Factory at Pimlico, when it was discovered that cut clothing given out to be made up by sewing-women at their homes was exposed to the infection of smallpox, scarlet fever, etc., in the houses where the work was done. Disinfection of all clothing made up outside the factories was therefore ordered; but experiments undertaken to determine the influence of disinfection on the texture of the cloth demonstrated a considerable deterioration in its strength and wearing capacity. Consequently, the amount of work given to outside workers was, and has continued to be, reduced to a minimum. These remembrances were called up by an item from a Philadelphia paper which showed that exactly the same problem had attracted the attention of the military authorities in the United States. Work is given out from the Schuylkill Arsenal to widows and daughters of soldiers and other deserving persons who have some moral claim on the government, and the price paid to such persons in America, as in England, is higher than the market wages. It is claimed that some women who received 75 cents per pair for making up trousers had turned the work over to a Russian sweater who had undertaken to make them for 30 cents per pair. The women are required to furnish a certificate from a factory inspector that their homes are in good sanitary condition, but manifestly this requirement does not involve any certification as to the condition of the sweater's establishment. On inquiry at the quartermaster-general's office, we learn that army clothing is made up mostly in New York and Philadelphia. In the former the rule is imperative that all work must be done at the factory. In Philadelphia, however, the custom has grown up, since the close of the Civil War, of giving out much of the work to deserving women. To protect the government and the clothing, frequent inspections are made to determine the sanitary conditions in each case and to prevent any illegal transfer of the work to others. The *Lancet* charitably allows that it would be gross injustice to conclude that all the work-women hand over their work to the sweaters. As a matter of fact, the discovery and publication of the one case in which this was done may be accepted as proof of the efficiency of the inspection system on which the quartermaster's department relies for the freedom of its clothing from household and sweatshop infections.

EXHAUSTION PARALYSIS IN EPILEPSY.

Exhaustion paralysis in epilepsy, of a temporary nature, is a peculiar and interesting phenomenon. In this condition we have the usual order of cause and effect reversed. The excessive functioning of the cerebral centers, seen in certain kinds of convulsions, produces an exhaustion of some centers, and a consequent paralysis supervenes which lasts from a few minutes to as many hours. The temporary paralysis is most marked in, or confined to, those parts most involved in convulsion. The condition was first recorded by BRAVAIS in 1824, and later by TODD, who expounded the exhaustion hypothesis, and in his honor it was called "Todd's hemiplegia." Scattering notes on the phenomena appear to have been made in the eighteenth century. It is not entirely confined to the sequelæ of certain kinds of epilepsy, as the condition was first noticed by PEREBOOM in puerperal eclampsia in his own wife. Temporary paralysis is met with

in many cerebral diseases, such as call for excessive fatigue of the cortical motor centers. We must not forget that it is essentially a fatigue of the motor cortex, and not of the muscular apparatus, as sometimes taught. A presentation before the N. Y. Neurological Society of an abstract of a monograph, covering a four-years study of the exhaustion phenomena following epileptic seizures, was made by CLARK at the society's annual meeting in April. This author, from a study of literature and many cases of his own, concludes that temporary exhaustion paralysis has been physiologically proven by various experiments, and is pathologically in evidence after many so-called idiopathic epilepsies as well as those of hemiplegic or traumatic origin. The evidence presented in this syndrome study of local temporary paralysis, goes far toward proving that the general exhaustion seen after general major epilepsy covered by coma and sleep, is analogous. CLARK lays great stress on the fact that careful study of these epilepsies on the dynamic side alone, will prove of great value; he adds his testimony to that of JACKSON, TODD, and RAYMOND, that there exists a strong relationship between all epilepsy and the various paralytic states of the brain.

EDDYISM EXPOSED.

"Christian Science" is receiving more notice than it has heretofore, and in such a manner that it ought to open the eyes of its deluded followers, unless their brains are so befuddled with insane delusions that common sense can find no lodgement there. While such articles as those of Dr. C. A. L. REED, Dr. EDMUND ANDREWS (vide JOURNAL, March 18, p. 578), and those of other medical men, are convincing to those who read them, the trouble is that, as they are published in medical journals only, they reach medical men alone, who need no convincing arguments to prove to them that "Christian Science" is void of both Christianity and science. However, others are now taking up the subject, and in the *North American Review* for March there is a strong paper by WILLIAM A. PURRINGTON on the "Legal Aspects of Christian Science," which is certainly most convincing and logic to an unprejudiced mind. Mr. PURRINGTON makes good use of ridicule and sarcasm in showing up the absurdities and the commercialism which seem to be the foundation of the movement, and his paper contains plenty of food for thought for those who think. The *Arena* for May contains two articles which, while written in a different style and for different motives, are the most valuable additions to the literature of the subject thus far made, in that they give the inner secrets which the vulgar have never known before. They are published under the general caption of "Christian Science and its Prophetess," one with the subtitle, "The Facts of the Case," by HORATIO W. DRESSER, the other "The Book and the Woman," by JOSEPHINE CURTIS WOODBURY. Evidently the object of the former is in part to defend "Dr." P. P. QUIMBY, a mesmerist or "healer" who "cured" Mrs. EDDY, then Mrs. PATTERSON. DRESSER is presumably a believer in metaphysic healing, phrenopathy, or something of the kind—at least a follower and personal acquaintance of QUIMBY—and from personal knowledge gives the beginnings, growth and inside history of Eddyism. He shows conclusively what has been printed before, that Mrs. EDDY took up QUIMBY's methods and theories and enlarged upon them, and that all the bosh about her "dreams" and "revelations" is, to use extremely mild language, fiction. The writer of "The Book and the Woman" was at one time not only a "scientist," but a confidante of Mrs. EDDY, and consequently in a position to learn more of the true inwardness of things than is the average follower. And she has made good use of the knowledge in the paper. She takes space to give the full name—Mrs. MARY MASON BAKER GLOVER PATTERSON EDDY, names duly earned in her many—four—marriages. How it will be possible for the followers of "Mother MARY" to have confidence in her hereafter is hard to conceive, but as they are forbidden to read anything except what she writes or endorses, they may possibly never read these papers.

THE X-RAY AS AN AID TO DIAGNOSIS.

The study of skiagraphy should engage the closest attention of those who expect to reach distinction in this new field of science, for an amateur will be likely to fail to obtain correct results, both as to the photograph itself and also to determine what is actually before him. No novice can at first sight point out definitely certain dark shadows and state positively that one represents a definite lesion, while another is proof that some other process exists. Skiagraphy entails also a certain amount of familiarity with the art of photography: 1, to know just where to put the Crookes' tube (or its modification); 2, how long the exposure is required in a given part; 3, to know how to develop the negative; and 4, to know how to interpret the picture when it is finished. Experience is the greatest teacher in this as in other scientific studies. When fully understood there seems no limit to its application in medical, and especially surgical questions. These facts were fully demonstrated several weeks ago in Philadelphia, at the meeting of the College of Physicians, Section on General Surgery. The room was darkened and upon the screen were thrown certain shadows showing ununited fractures, dislocations, foreign bodies and morbid conditions of varied character. Of the pictures shown, probably none were more distinct than those of renal and vesical calculi. This becomes of the greatest importance, since it gives a guide to the surgeon in several ways: 1, whether to operate; 2, how many bodies are present (if in renal calculi); 3, how to locate the stone. In foreign bodies in the eye, a correct skiagraph will determine the exact position of the particle and guide the operator. While its influence is not felt to such a great extent in general medicine, let us hope that future improvements in the technic will throw more light upon certain morbid processes with which we at present are not familiar.

WILLIAM LEE HOWARD, Baltimore, leaves for a trip to Europe, early in May.

Medical News.

THE FIFTY-THIRD annual commencement of the University of Buffalo, Buffalo, N. Y., was held April 25. The graduates in medicine numbered forty-eight.

DR. O. BEVERLEY CAMPBELL, president of Central Medical College, St. Joseph, Mo., will sail for Europe this month. He will spend a year with Lawson Tait.

AT ITS last session, the legislature of Minnesota granted the Minnesota State Board of Health $7500 per annum, for the next two years, for bacteriologic work.

A CABLEGRAM has been received by the surgeon-general of the marine-hospital service, stating that eight cases of yellow fever have developed in Vera Cruz, Mexico.

DR. JAMES NEVINS HYDE, Chicago, has been appointed one of the editors of the *International Journal of Leprosy*, Berlin, which is to begin publication this month.

IT IS reported that a virulent type of smallpox has simultaneously appeared in various parts of Germany, the principal foci of which seem to be at Iserlohn, Hanover and Moczalo.

THE HOSPITAL building at the Iowa Institution for Feeble-Minded Children, at Glenwood, burned recently. There were about fifty inmates; all rescued. The loss was about $20,000.

EPIDEMICS of cerebrospinal fever are reported at Manheim, Pa., and at Pana, Ill., in both of which places the boards of health are exercising every precaution to prevent the disease from spreading.

DR. L. S. MCMURTRY, Louisville, Ky., attended the banquet tendered Dr. Reamy in Cincinnati in honor of his 70th birthday, and responded to the toast: "Our Guest, the Pioneer Surgeon."

DR. SIDNEY J. MEYERS, late acting assistant-surgeon, assigned to the 7th army corps with General Keifer, has returned and resigned his commission in the army. He will practice his profession in Louisville, Ky.

BY A recent royal decree, persons holding diplomas of Doctor of Dental Medicine issued by the dental department of the University of Pennsylvania will be admitted to the theoretic examinations in dentistry in the Netherlands.

IT IS SAID that General Ludlow will at once expend $350,000 on the sewering and paving of Havana and other engineering work in that city, and when all the improvements have been completed the total will approximate $500,000.

NEW CASES of smallpox in Pennsylvania have been reported as follows: Pittsburg, two cases; Altoona, one case; Uniontown, eight cases. In the latter place the government has ordered all mail thoroughly fumigated, while all freight and traffic business has been suspended.

DR. HERMAN SPAULDING, Chicago, has been certified as chief medical inspector of the health department by the civil service commission, as a result of the recent examination for that position. He will succeed Dr. George Hunt, who has held the position for some time.

THE BILL abolishing coroners' juries in all counties of New York except Erie (in which Buffalo is situated), and New York, Kings, Queens and Richmond, comprising the city of New York, also the bill making the office of coroner of a county a salaried position, has been signed by the governor.

THE body of Dr. John Blair Gibbs, of the United States Marine Corps, brought from Cuba by the transport *Crook*, April 28, was buried on the following day in St. Mary's Cemetery, Portsmouth, N. H. Dr. Gibbs was one of the first Americans killed at Guantanamo (vide JOURNAL, xxxi, pp. 1481, 1534).

SENATOR Henry D. Heller, M.D., of Hellertown, Pa., has been appointed by Governor Stone to the position of quarantine physician of the port of Philadelphia, to succeed Dr. Henry C. Boenning. Dr. Heller is a graduate of the Bellevue Medical College, New York, and has been in active practice for the past twenty years.

DR. E. A. DE SCHWEINITZ has been appointed by the Secretary of State, a delegate to the congress on tuberculosis, which will meet in Berlin, May 24 to 27. Dr. de Schweinitz is dean of the Columbian University Medical School, secretary of its hospital board and chief of the biochemic division of the United States Department of Agriculture.

MEDICAL legislation that was proposed in the last legislature of Minnesota, modifying the medical practice law and recognizing the osteopaths, after taking up a number of days in its discussion, was finally laid on the table and remained there at the close of the session. Minnesota has at present a good medical law, and this outcome is therefore fortunate.

A RECENT opinion handed down in the United States Supreme Court, in the case of Oliver Wendell Holmes, Jr., vs. G. D. Hurst, holds that copyright on a book the contents of which have been published serially without being previously copyrighted, is invalid. The case involved the copyright of the "Autocrat of the Breakfast Table," by Dr. Oliver Wendell Holmes.

IN A RECENT suit for damages instituted against a hospital in Philadelphia, Judge Audenreid of the court of common pleas stated that as a hospital had no capital stock and was not organized for the business of making profit, he did not think a verdict would stand against it in case an autopsy was held without the consent of the relatives. A further hearing will be had in the case.

SOME TIME ago J. Pierpont Morgan pledged $1,000,000 to the New York Lying-in-Hospital for the erection of a new building, provided the managers raised an amount sufficient to complete its endowment. It is now announced that the desired funds have been secured and the new building will be at once commenced. Mr. Morgan has made an additional gift of two city lots adjoining the city property already owned by the hospital.

ACCORDING to reports, Dora England, a girl 22 years of age, residing in Newark, N. J., recently died in the city hospital from the effects of poisoning by Paris green, taken with suicidal intent. The girl was not discovered until two hours subsequently, when a leading "Christian Scientist" of that city was called in. It is further stated that the only means resorted to consisted in praying for the patient. A physician

was subsequently called in, but too late so save the life of the patient.

HEREAFTER all resident physicians of the Philadelphia Hospital—"Blockley"—must be residents of Philadelphia. The students as well as the medical schools are up in arms over this change of affairs. As a rule there are 2000 medical students in Philadelphia each year, and Blockley is always a coveted place to many of those who are about to graduate. Twenty resident physicians are chosen annually, the term of service being fifteen months.

WHILE on a recent visit to Pittsburg, Commissioner Levi Wells of the Food and Dairy Commission announced that the prosecution of butchers selling chemically prepared beef would be pushed with vigor by his department. The practice was found to exist also in Philadelphia. Packages containing the necessary chemicals to be used were found, the principal ingredient of which proved to be boric acid. Full directions for use were found on the packages.

AN OFFICER of the New York Fire Department, impressed with the difficulty which he had frequently observed in the resuscitation of partially asphyxiated persons rescued from burning buildings, has recommended that in connection with the first aid to the injured at fires, and particularly for those who are partially suffocated by gas or smoke, small tanks of oxygen be placed on the hook-and-ladder trucks of the department, which, in his opinion, would in many cases save life.

GOVERNOR ROOSEVELT has signed a bill just passed by the New York legislature, which authorizes the trustees of the Loomis Laboratory to transfer its real estate to any educational institution which they may select. During the past season the laboratory, against the protest of the authorities of the University of the City of New York, with which it was formerly connected, has been utilized by the medical department of Cornell University, and it will now probably be formally transferred to that institution.

ON BEHALF of the trustees of the Medico-Chirurgical Hospital, Philadelphia, Mayor-elect Ashbridge conferred certificates of honor on several hundred trained nurses who had volunteered their services during the late war in the treatment of the soldiers brought to the Medico-Chirurgical Hospital. The certificates were illumined in red, green and gold, and signed by John C. Grady, acting president; William King, vice-president; Dr. J. M. Anders, secretary; L. Webster Fox, treasurer, and Drs. John V. Shoemaker, Ernest Laplace, W. Easterly Ashton, W. L. Rodman, W. E. Hughes and W. T. Pratt.

THE STATE board of health of Delaware has established a laboratory in Newark, Del., at the State College, for the purpose of aiding physicians of the State in the diagnosis of typhoid fever, diphtheria, tuberculosis, hydrophobia, as well as other diseases which can be elucidated by examination of urine, blood, stomach contents, etc. The aim will also be to carry on original investigations with a view of furthering the progress of sanitary science in general, and bacteriology in particular. Professor Chester, the State bacteriologist, has been appointed director, and Dr. A. Robin bacteriologist and pathologist to the laboratory.

Prof. J. C. WEBSTER of McGill University, Montreal, formerly of the University of Edinburgh, has accepted the chair of obstetrics and gynecology in Rush Medical College, Chicago, to succeed the late Prof. James H. Etheridge. He brings to this new field a wealth of experience with the superb training which characterizes the modern methods of the great University of Edinburgh, and it is believed that his coming will be a great incentive to the scientific spirit in the profession in this country, the results of which will be incalculable in their benefits to the people. Among others under consideration were Dr. Edward P. Davis, professor of obstetrics at the Jefferson Medical College, Philadelphia, and Dr. J. Whitridge Williams of Baltimore.

COMMEMORATIVE OF CENTENNIAL ANNIVERSARY.—The issue of the *Maryland Medical Journal* of April 29 is a souvenir number issued in commemoration of the centennial anniversary of the organization of the Medical Chirurgical Faculty of Maryland, and reflects great credit on the publishers. It gives a brief sketch of the faculty from its organization in 1799, and contains many illustrations of historic interest; among others: Baltimore in 1799; a facsimile of a newspaper account of the first meeting of the faculty, from the *Maryland Journal and Baltimore Advertiser*, June 11, 1799; photographs of the early presidents of the faculty; an illustration of the old Baltimore Hospital for the Insane, the site of which is now occupied by the Johns Hopkins Hospital buildings; facsimile of the diploma of Dr. John Archer (see JOURNAL, April 29, p. 960); also one of a diploma of the Washington College of Medicine, of the *Baltimore Medical and Physical Journal*, the first medical journal in Maryland, and of the first page of the first number of the *Maryland Medical Journal*, with a number of other illustrations—anatomic plates, surgical instruments, etc.

Association News.

Columbus Meeting.—We are informed that the committee having in charge the Section dinners for the evening of June 6, at the coming meeting of the ASSOCIATION, are making active preparations for a very enjoyable time, and have adopted one form of menu card to be used at each of the Section dinners. On the first page it will contain the name of the Section, with the place and date of the banquet, and the emblem for this page will be the winged rod of Hermes, the messenger of the gods. The second page will contain the names of the officers of the Section and the hotel at which the dinner is being given, the third, the menu and the list of toasts, while on the last will be a cut of the State house.

Resolutions of Medical Association of Alabama.—At a meeting of the Medical Association of the State of Alabama, held at Mobile, April 18–21, 1899, the following preamble and resolutions, introduced by Dr. J. T. Searcy of Tuscaloosa, were referred to the board of censors, favorably reported by them, and unanimously adopted by the Association:

WHEREAS, At the meeting of the AMERICAN MEDICAL ASSOCIATION, held at Denver, in 1898, a resolution was adopted which, if carried into effect, would virtually exclude from membership a large proportion of its Southern members; and

WHEREAS, The said resolution was adopted without discussion, under a misconception of the views of the Southern Medical College Association; and

WHEREAS, The requirements stipulated in said resolution could not be legally carried out by the parties who would be excluded by its operation; and

WHEREAS, We do not believe the AMERICAN MEDICAL ASSO-

CIATION desires to exclude from membership men who have been its staunch supporters; and

WHEREAS, The elevation of the standards of medical education have always been one of the principal objects of the Medical Association of the State of Alabama, therefore,

Resolved, That this association fully endorses all legitimate and practical efforts in the direction of higher medical education.

Resolved, That the imposing of a time limit which could not be carried out by the members of the Southern Medical College Association, and also of a penalty in default of compliance therewith, was unjust, and in violation of the organic law and legal jurisdiction of the AMERICAN MEDICAL ASSOCIATION.

Resolved, That this association respectfully requests the AMERICAN MEDICAL ASSOCIATION to repeal the resolution in question, and to enact such measures only as can be complied with by the American Medical College Association and the Southern Medical College Association without violation of existing obligations to matriculated students, which obligations are enforceable by law.

Resolved, That a copy hereof be forwarded to the president and to the secretary of the AMERICAN MEDICAL ASSOCIATION, and also to the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, with the request that it be published.

Done at Mobile, April 21, 1899.

H. A. MOODY, M.D., President.

GEO. P. WALLER, M.D., Secretary.

Resolutions of Tennessee State Medical Society.—

WHEREAS, At the meeting of the AMERICAN MEDICAL ASSOCIATION in Denver last June, there was introduced and passed a resolution that hereafter no member of a faculty of any medical college, not requiring attendance on four full courses of lectures before graduation, and no graduates of such schools shall be permitted to register, at any meeting of the ASSOCIATION, either as delegate, permanent member, or member by application, and

WHEREAS, This resolution is in conflict with that part of the Constitution which defines membership in either of these capacities; be it therefore

Resolved, That it is the sense of the Tennessee State Medical Society that the resolution should be declared null and void by the Judicial Council of the AMERICAN MEDICAL ASSOCIATION; be it further

Resolved, That any attempt, at the coming meeting of the AMERICAN MEDICAL ASSOCIATION, to amend the constitution in that part defining membership, without allowing the colleges of the Southern Medical College Association to graduate students that have already matriculated, at the end of the third course, would be both unfair and unjust, since between students thus matriculated and the colleges there is an implied obligation that should not be violated.

The unfairness of such action as was attempted at Denver is the more apparent in that the Southern Medical College Association had already before them, awaiting final action, an amendment to their constitution, making requisite four graded courses of lectures before graduation, which amendment was adopted in December last, at the Memphis meeting.

Adopted April 12, 1899. W. D. HAGGARD, JR., Sec'y.

Section on Obstetrics and Diseases of Women.—The preliminary program of this Section contains the following titles:

1. Pelvic Tuberculosis. Augustus P. Clarke, Cambridge, Mass.
2. Gynecologic Consideration of the Sexual Act. Denslow Lewis, Chicago.
3. Mothers of Yesterday, To-day and To-morrow. Women of the Past, the Present and the Future. Jno. S. Pearson, Louisiana, Mo.
4. Obstruction of the Biliary Ducts in Women. Edwin S. Ricketts, Cincinnati.
5. Cholecystectomy. Clinton Cushing, Washington, D. C.
6. Anatomy of the Suspensio-Uteri Ligament. J. Wesley Bovee, Washington, D. C.
7. New Method for Treatment of Retroversion of the Uterus. C. E. Ruth, Keokuk, Iowa.
8. Another Method of Uterine Suspension. Robt. T. Morris, New York City.
9. Three Years' Experience with Vaginal Shortening of the Round Ligaments for Retroversion and Flexions. Hiram N. Vineberg, New York City.
10. What Shall We Do with the Uterine Fibroid? D. Tod Gilliam, Columbus, Ohio.
11. Uterine Fibroids. Henry D. Ingraham, Buffalo, N. Y.
12. Indications for and Operative Treatment of Post-puerperal Sepsis. John B. Deaver, Philadelphia.
13. Treatment of Endometritis by Irrigation and Drainage. Augustus H. Goelet, New York City.
14. Pelvic Inflammation. O. Beverly Campbell, St. Joseph, Missouri.
15. Lymphatics of the Peritoneum. Byron Robinson, Chicago.
16. Surgical Significance of Certain Physiologic, Anatomic and Pathologic Peculiarities of the Peritoneum. H. D. Niles, Salt Lake City, Utah.
17. Colloid Carcinoma of the Ovaries. Chas. G. Cumston, Boston.
18. Management of Pregnancy Complicated with Abdominal Tumor. Rufus B. Hall, Cincinnati.
19. Clinical and Microscopic Differentiation of Sclerocystic and Cirrhotic Degeneration of the Ovaries, and Chronic Ovaritis. W. H. Humiston, Cleveland, Ohio.
20. Treatment of Ectopic Pregnancy, At or Near Full Term; the Child Living. L. H. Dunning, Indianapolis, Ind.
21. Early Ovariotomy, Its Practical Necessity. M. Rosenwasser, Cleveland, Ohio.
22. Lower Bowel as a Causative Factor in Diseases of Women. H. E. Pearse, Kansas City, Mo.
23. Prophylaxis of Uterine Cancer. W. W. Grant, Denver.
24. Prevention and Treatment of Cancer of the Uterus. A. Lapthorn Smith, Montreal.
25. New Operation for Cancer of the Uterus. F. H. Martin, Chicago.
26. Does Removal of the Ovaries Exert a Beneficial Influence on the Subsequent Progress of Malignant Disease? E. E. Montgomery, Philadelphia.
27. Total Extirpation of the Uterus, Its Appendages, Tumors, Etc., without Ligatures or Retention Clamps; Demonstration of a new Instrument for Hemostasis, with a Report of Clinical Cases. H. P. Newman, Chicago.
28. Study and Teaching of Obstetrics in our Medical Schools. Eliza H. Root, Chicago.
29. Necessary Abortion. W. C. Bowers, Decatur, Ala.
30. Association of Pelvic Diseases and Insanity in Women and the Influence of Treatment of the Local Disease upon the Mental Condition. H. A. Tomlinson, St. Peter, Minn.
31. Reciprocal Relations of Gynecologic and Neurologic Diseases. Chauncey D. Palmer, Cincinnati.
32. Relation of Uterine Disease to Some of the Insanities. C. C. Hersman, Pittsburg, Pa.
33. Chronic Volvulus Produced by Absorption of a Myomatous Tumor after Salpingo oöphorectomy: A Clinical Note. James F. W. Ross, Toronto, Ont.
34. Report of Some Rare Cases in Gynecology, with Remarks. J. N. Martin, Ann Arbor, Mich.
35. Treatment of Prolapse of the Uterus and Anterior Vaginal Wall after the Menopause. T. J. Watkins, Chicago.
36. Vaginal or Abdominal Section in Pelvic Surgery. B. F. Baer, Philadelphia.
37. Advantages of Vaginal Section in Surgical Treatment of Diseases of Women. J. Riddle Goffe, New York City.
38. What Becomes of the Patients after Vaginal Puncture and Drainage? Joseph Price, Philadelphia.
39. Intestinal Lesions Associated with Intra abdominal Operation, with Report of Resection of the Ileum in Five Cases. T. A. Ashby, Baltimore, Md.
40. The Exploratory Incision. F. F. Lawrence, Columbus, Ohio.
41. Celiotomy Itself. C. A. L. Reed, Cincinnati.
42. Treatment of Patients after Abdominal Section. C. L. Bonifield, Cincinnati.
43. Ovarian Dermoids. J. E. Cowles, Los Angeles, Cal.
44. A Rare Cerebral Lesion following Child-birth. Louis Faugéres Bishop, New York City.
45. A New Technic for the Radical Excision of Non-malignant Rectal Strictures. Reuben Peterson, Chicago.
46. Treatment of Puerperal Eclampsia and Postpartum Urinary Lesions? R. R. Kime, Atlanta, Ga.
47. Reconstruction of the Pelvic Structures Incident to Lesions of the Perineal Tissues. Henry O. Marcy, Boston.
48. Operative Wounds of the Bladder in the Female, and Their Treatment. Frederick Holme Wiggin, New York City.
49. Repair of Extensive Lacerations of the Female Bladder and Urethra. I. S. Stone, Washington, D. C.
50. Treatment of Acute Tuberculosis of the Peritoneum. Henry T. Byford, Chicago.
51. Gonorrhea in the Female Child. A. D. Wilkinson, Lincoln, Neb.
52. Cesarean Section vs. Embryotomy, with a Report of Two Cases of Cesarean Section. T. J. Maxwell, Keokuk, Iowa.
53. Sixty-five Consecutive Abdominal Sections Without a

Death, with Clinic and Pathologic Reports. Hunter Robb, Cleveland, Ohio.

54. Analysis of the Mortality Following 641 Abdominal Sections. W. G. Macdonald, Albany, N. Y.

55. Analysis of Cases of Abdominal Section Done for Other Purposes than Hysterectomy. William Mosley, Baltimore.

56. Antenatal Pathology. J. W. Ballantine, Edinburgh, Scotland.

57. A Monstrosity, Its Causes and Sequellæ. S. K. Crawford, Chicago.

58. Ectopia Vesicale. Joseph Rilus Eastman, Indianapolis, Ind.

59. Nature, Cause and Treatment of Shock. Daniel T. Nelson, Chicago.

60. Address of Chairman. A. H. Cordier, Kansas City, Mo.

Other papers are promised by B. Sherwood Dunn, Boston; C. C. Frederick, Buffalo, N. Y.; W. E. B. Davis, Birmingham, Ala.; James T. Jelks, Hot Springs, Ark.; E. Gustav Zinke, Cincinnati; W. D. Haggard, Jr., Nashville, Tenn.

Section on Physiology and Dietetics.—Papers to be read in this Section, at the Columbus meeting, are:

1. Inhibitory Action of the Cerebrum. J. F. Peavy, Asheville, N. C.

2. Remarks on the Diet at or about the Period of Weaning. Louis Fischer, New York City.

3. Value of Water as a Therapeutic Agent in Connection with Other Remedies. M. F. Coomes, Louisville, Ky.

4. Some Dietetic Observations in the Gouty Diatheses. Edward P. Adams, Cincinnati.

5. The Sum Total of the Potentialities is an External Psychic Continuation, and is, of Itself, the Manifestation of Creative Power. E. C. Hebbard, Boston.

6. Diabetic Diet. Francis E. Carrol, Boston.

7. Dietetics in State Hospitals for the Insane. Frank C. Hoyt, Mt. Pleasant, Iowa.

8. Distilled Water as a Food. E. Cutter, New York City.

9. Dietetics in Chronic Diseases. J. E. Kinney, Denver.

10. The Carbohydrates of the Liver. A. M. Bleile, Columbus Ohio.

11. Dietetics in Health and Disease. Mary E. Green, Charlotte, Mich.

12. The Neurotic Diet. Henry C. Eyman, Cleveland, Ohio.

13. Digestive Ferments. A. Atkinson, Baltimore, Md.

14. Condensation and Sterilization of Milk by Refrigeration; a Revolution in the Milk-Supply of Cities. Henry O. Marcy, Boston.

15. Food and Drink. Elmer Lee, New York City.

16. Peripheral Resistance. V. L. Treynor, Council Bluffs, Iowa.

17. Medical Practice. S. K. Crawford, Chicago.

18. The Division of Chemistry of the U. S. Department of Agriculture; What it has Contributed to Dietetics and Physiologic Chemistry. C. D. Spivak, Denver.

19. Mental Fatigue. Edward Thorndike, Cleveland, Ohio.

20. Food and Water as Factors in the Cure of Disease. A. T. Cuzner, Gilmore, Fla.

21. Morphology of the Air. Ephraim Cutter, New York City.

22. Physiology of Sight. William Chatham, Louisville, Ky.

23. Influence of Opium Given in Infancy on After Life. T. D. Crothers, Hartford, Conn.

24. Interdependence of Physiology and Morphology and Their Educational Importance. James Weir, Jr., Owensboro, Ky.

25. Physiology of Mind. F. DeValette, Munich, Austria.

26. Thought as a Correlative Force. E. J. Bergen, Washington, N. J.

27. Cell Development. Joseph Smith, Latchford, England.

Other papers are promised by: D. J. Snyder, Columbus, Ohio; E. M. Hatton, Columbus, Ohio; J. F. Marchand, Canton, Ohio; Joseph Price, Philadelphia.

Section on Laryngology and Otology.—For the Columbus meeting of the ASSOCIATION, this Section will offer the following program:

JUNE 6, 2 P.M.

1. Address of Chairman. Emil Mayer, New York City.

2. Recurring Membranous Pharyngitis. J. O. McReynolds, Dallas, Tex.

3. Report of a Case of Multiple Laryngo-Tracheal Stenosis. Thomas Hubbard, Toledo, Ohio.

4. Tuberculosis of the Pharynx, with a Preliminary Report of Tuberculous Infection of the Tonsils and the Lymphoid Tissue of the Pharynx. Clement F. Theison, Albany, N.Y.

5. Fibroid Tumors of the Nasopharynx. Wm. Scheppegrell, New Orleans, La.

6. Accessory Thyroid Tumors at the Base of the Tongue. J. Schadle, St. Paul.

7. Observations on the Asch Operation for Deviation of the Cartilaginous Septum. Max Thorner, Cincinnati.

8. Some Experiments in Throat Photography. J. H. Coulter, Chicago.

9. Value of Muscle-Training in the Treatment of Vocal and Speech Defects. G. H. Makuen, Philadelphia.

10. Prognosis of Laryngeal Tuberculosis. Robert Levy, Denver.

11. Treatment of Chronic Croup. Edwin Rosenthal, Philadelphia.

12. Lithemic Pharyngitis. J. S. Stucky, Lexington, Ky.

13. Parasitic Affections of the Pharynx. E. O. Sisson, Keokuk, Iowa.

JUNE 7, 9 A.M.

JOINT MEETING OF THE SECTIONS ON OPHTHALMOLOGY AND ON LARYNGOLOGY AND OTOLOGY.

Subject for Discussion:—"The Relation of Ocular Diseases to Affections of the Nose and Neighboring Cavities."

14. On Some Points in the Symptomatology, Pathology and Treatment of the Sinuses Adjacent and Accessory to the Orbit. Charles Stedman Bull, New York City.

15. On Nasal Stenosis, in their Relation to Ocular Disturbances. D. Bryson Delavan, New York City.

16. On Eye Troubles, Attributable to Nasopharyngeal and Aural Disturbances. Joseph A. White, Richmond, Va.

17. On Diseases of the Accessory Sinuses, in their Relation to Diseases of the Eye. J. H. Bryan, Washington, D. C.

JUNE 7, 2 P.M.

18. Disease of the Antrum of Highmore: A Study of One Hundred and Fifty Cases. L. C. Cline, Indianapolis, Ind.

19. Necrosing Ethmoiditis. W. W. Bulette. Pueblo, Colo.

20. Relation of Nasal and Accessory Cavities and Dental Lesions. D. Braden Kyle, Philadelphia.

21. The Determining Factor in the Symptomatology and Diagnosis of Infective Sinus Thrombosis. Fred Whiting, New York City.

22. Report of a Case of Brain and Metastatic Abscesses Following Suppurative Otitis Media. D. Milton Green, Grand Rapids, Mich.

23. Four Cases of Otitic Cerebellar Abscess, with Stereopticon Illustrations. B. Alexander Randall, Philadelphia.

24. Suppurating Mastoiditis, with Report of Cases. J. H. Bryan, Washington, D. C.

25. Diagnosis and Treatment of Middle-Ear Diseases, with a new Diagnostic Symptom of Eustachian Stricture. J. H. Farber, Dayton, Ohio.

26. Restoration of the Deaf Born. M. M. Stapler, Macon, Ga.

27. Treatment of Hypertrophic Catarrh of the Middle and Internal Ear. F. B. Tiffany, Kansas City, Mo.

28. Operative Interference in Chronic Suppurative Otitis Media. L. S. Somers, Philadelphia.

29. Concerning the Complications of Acute Purulent Otitis Media. S. E. Allen, Cincinnati.

30. Extension Massage of the Ossicles, with a new Aural Masseur. Hamilton Stillson, Minneapolis.

31. Conveyance of Infection Through the Medium of the Ear Syringe: A Remedy. F. C. Todd, Minneapolis.

32. Uncommon Causes of Pyogenic Infection of the Middle Ear. Robert Sattler, Cincinnati.

33. Anatomic Variations of the Nasal Chamber and Associated Parts. M. H. Cryer, Philadelphia.

34. Further Report on Submucous Linear Cauterization. Norval H. Pierce, Chicago.

35. The Atomizer and Its Use. G. V. Woolen, Indianapolis.

36. Notes on Some of the More Recent Remedies in Throat, Nose and Ear Practice. S. G. Dabney, Louisville, Ky.

37. "Colds." Ephraim Cutter, New York City.

JUNE 8, 2 P.M.

38. Headaches of Nasal Origin. Carolus M. Cobb, Lynn, Mass.

35. Hypertrophy of the Turbinated Bodies, and their Relation to Nasopharyngeal and Middle-Ear Inflammations: with Deductions Based upon 1500 Operations. C. R. Holmes, Cincinnati.

40. Intranasal Angioma or Bleeding Polypus of the Septum. W. E. Casselberry, Chicago.

41. Carcinoma of the Nasal Passages, with Report of a Case. J. S. Goodale, Boston.

42. Sarcoma of the Nasal Passages. H. V. Würdeman, Milwaukee.

43. Angioma of the Nose. T. R. Chambers, Jersey City, N.J.
44. Adenosarcoma of the Septum. A. R. Barker, Cleveland.
45. Nasal and Aural Complications in Epidemic Influenza. Sargent F. Snow, Syracuse, N. Y.
46. Common Nasal Causes of Eye Symptoms. W. L. Grant, Fargo, N. D.
47. The Treatment of Nasopharyngeal Adenoids. Louis J. Lautenbach, Philadelphia.

Rates for Columbus Meeting.—Just as our last form is ready for the press we learn that the following action has been taken by the Western Passenger Association concerning the rates for the next meeting of the ASSOCIATION. The rate is to be one lowest regular first-class fare plus $2 for the round trip. This is to apply from points in the territory of the Western Passenger Association and Utah to Columbus and return, except that from points from which the local one-way rate to the Eastern gateways of the Western Passenger Association is less than $6, rates are to be made on the basis of a fare and one-third for the round trip to such gateways, added to the rate of one first-class fare for the round trip tendered therefrom, provided that where such one and one-third fare to Chicago is $2 or less, 50 cents additional is to be added to the return transfer.

Tickets are to be sold on such dates as will enable the passengers to pass through the eastern gateways of the above association on June 2, 3 and 5, and from points in Trans-Missouri territory east of the eastern State lines of Colorado and Wyoming, tickets will be sold June 1, 2 and 4; from points in Colorado and Wyoming they will be sold May 31, June 1 and 3, and from points in Utah they will be sold May 30, 31 and June 2. The tickets are to be good for return passage leaving Columbus up to and including June 13; the tickets to be limited to continuous passage in each direction, going trip to commence on date of sale and the return trip on date of execution. The tickets are also to be of the iron-clad signature form, which provides for execution by the agent of the terminal line at Columbus.

Public Health.

Immunity of Infants to Measles.—Jurgenssen asserts that very young infants are "immune," and cites a recent series of observations of forty-one exposed to measles. All over six months contracted the disease, while the twenty-five under five months were not affected.—*Deutsches Archiv f. Klin. Med.*, lxii, 3 and 4.

Rabies in Brussels.—In the *Tablettes Mensuelles* for February, 1899, of the Royal Society of Public Medicine and Medical Typography of Belgium, the secretary, Prof. U. Labo, gives prominence to a statement that during the past year and a half a veritable epizootic of rabies has prevailed in Brussels and its neighborhood. Although for several years this disease has been frequently reported in many of the provinces, and particularly in those bordering the Département du Nord (France), there were but 3 cases in Brabant in 1896. From March to the end of 1897 there were discovered 17 cases in Brussels and its suburbs. In 1898 the disease prevailed to a most unusual extent. Every week from 1 to 5 or 6 cases were reported. This extension is attributed to carelessness on the part of the authorities in carrying out the provisions of law for the suppression of the disease, particularly in certain localities where the canine population is large and vagabondish.

Health of Denver.—The annual report of the bureau of health for the years 1897 and 1898, just issued by the retired health commissioner, Dr. William P. Munn, furnishes the following interesting statistic data: The rate of mortality has decreased steadily since 1890, when it was 23.17 per 1000 of population, to 18.57, 14.28, 13.87, 12.06, 11.19, 10.48, 11.49 and 11.55 during the following years respectively. A résumé of deaths by classes gives the following figures: Communicable diseases, 698 and 670; general diseases, 142 and 156; diseases of the digestive system, 197 and 241; respiratory, 196 and 255; nervous system, 172 and 180; genito-urinary, 102 and 116; death by violence, 109 and 95; by poison, 40 and 43; during the years 1897 and 1898 respectively, of the communicable diseases, pulmonary tuberculosis stands at the head with a mortality of 924 during the two years, of which 779 contracted the disease elsewhere. Of general diseases, cancer of the stomach claimed 28 and 15 victims. Of diseases of the digestive system, cholera takes the lion's share, but there were only 35 and 39 deaths reported. Of the respiratory system, pneumonia leads with 124 and 153 deaths; circulatory system, valvular heart disease 81 and 97; genito-urinary, with nephritis 77 and 85; nervous system, cerebral hemorrhage 37 and 39; death by violence, surgical shock 19 and 12. Deaths by poison deserve a more detailed account. Alcohol caused 30 during the two years; morphin 10, carbolic acid 6, chloroform anesthesia 7, laudanum 5, rough on rats 4, opium 4, cocain, corrosive poison, ether anesthesia, strychnin, phenacetin, creosote, matches, cyanid of potassium, 1 each. The suicides by violence have used the following means: gunshot, 20 during 1897 and 1898; cutting throat, 1; hanging, 2; strangulation, 1; knife wound, 1.

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague have been reported to the surgeon-general of the United States Marine-Hospital Service for the week ended April 29, 1899:

SMALLPOX—UNITED STATES.

Alabama: Tallapoosa County, April 14, prevalent.
California: Los Angeles, April 15–22, 6 cases.
District of Columbia: Washington, April 27, 1 case.
Georgia: Savannah, April 17, 2 cases, origin, Montgomery, Alabama.
Indiana: New Albany, April 15–22, 2 cases.
Louisiana: Shreveport, April 15–22, 3 cases; New Orleans, April 15–22, 9 cases.
Massachusetts: Boston, April 17–28, 6 cases.
Minnesota: Minneapolis, April 9–15, 1 case; St. Paul, April 9–15, 1 case.
New York: Buffalo, April 20, 1 case; Elmira, April 15–22, 1 case.
Pennsylvania: Allegheny County, March 30 to April 22, 4 cases; Cambria County, March 30 to April 22, 1 case; Blair County, March 30 to April 22, 22 cases; Fayette County, March 30 to April 22, 20 cases; Somerset County, March 30 to April 22, 48 cases; Washington County, March 30 to April 22, 1 case.
Rhode Island: Providence, April 21, 2 cases.
Texas: Galveston, April 1–15, 10 cases; Laredo, April 1–8, 17 cases.
Virginia: Newport News, April 14–19, 9 cases; Norfolk, April 13–26, 41 cases; Portsmouth, April 13, 10 cases.

SMALLPOX—FOREIGN.

Belgium: Ghent, April 1–18, 1 death.
Brazil: Bahia, March 18 to April 8, 8 cases, 1 death; Rio de Janeiro, March 3–10, 1 case, 7 deaths.
China: Hongkong, March 3–11, 3 cases, 1 death.
England: London, March 25 to April 8, 2 cases.
Greece: Athens, March 25 to April 8, 62 cases, 32 deaths.
India: Bombay, March 14–21, 10 deaths; Calcutta, March 4–18, 8 deaths.
Korea: Seoul, March 11, many cases and deaths.
Mexico: Mexico, April 9–16, 10 cases, 4 deaths.
Russia: Moscow, March 25 to April 1, 20 cases, 3 deaths; Odessa, April 1–8, 2 cases, 1 death; St. Petersburg, March 25 to April 1, 16 cases, 3 deaths; Warsaw, March 18 to April 1, 5 deaths.
Turkey: Constantinople, March 20 to April 10, 22 deaths; Smyrna, March 12–26, 1 death.
Uruguay: Montevideo, March 11–18, 1 case.

YELLOW FEVER.

Brazil: Bahia, March 18 to April 1, 13 cases, 7 deaths; Rio de Janeiro, March 3–10, 91 cases, 58 deaths.
Mexico: Vera Cruz, April 13–20, 4 deaths.

CHOLERA.

India: Bombay, March 14–21, 7 deaths.

PLAGUE.

Formosa: Tamsui, February 22 to March 8, 63 deaths.
India: Bombay, March 14–21, 1128 deaths officially reported. Probably 1900; Calcutta, March 3–18, 188 deaths.

Necrology.

M. S. CARR, M.D., Galesburg, Ill., died suddenly April 29. Dr. Carr was 75 years old and had been practicing medicine since he was 21. During the Civil War he was captain of the Fourth Illinois Cavalry.

ALFRED C. DRURY, M.D., Canton, N. Y., died April 22. He was a graduate of the Medical Department of the University of Vermont, class of 1874.

SERANUS BOWEN, M.D., Harvard 1876, died in Boston, Mass., April 7. . . Leslie Gillett, M.D., Beatrice, Neb., April 24, at the age of 63 years. . . N. F. Hall, M.D., Fulton, N. Y., April 24, aged 43 years. . . Frederick A. Hamilton, M.D., Chico, Cal., April 20. . . David A. Hengst, Denver, Col., April 24. . . William E. Kissane, M.D., N. Y. Univ., 1885, Brooklyn, N. Y., April 26. . . B. M. Rakestraw, M.D., Hicksville, Ohio, April 25, aged 81 years.

RESOLUTIONS ON DEATH OF P. L. HOLLAND, M.D. (vide JOURNAL, March 11, p. 563).—The following resolution was unanimously adopted at a meeting of the Chicago Neurological Society, April 25, 1899:

WHEREAS, The Chicago Neurological Society has lost by death Dr. Philo Leon Holland, a charter member, and the first one to read a paper before the society; and

WHEREAS, We, the members of this society, have lost in Dr. Holland a cherished friend and an honored colleague; therefore, be it

Known that we, as a whole and individually, sincerely mourn the untimely end of our comrade, and that his sterling integrity, high mental qualities and modest faithfulness to his aims and ideals will always remain a pleasant and inspiring memory, and be it

Ordered that this resolution be spread upon the minutes of this society and that copies be sent to the nearest relatives of the deceased and to the medical journals of this city.

RICHARD DEWEY, Pres.
HUGH T. PATRICK, Cor. Sec.

DEATHS ABROAD.

ALFRED GRAEFE, formerly professor of ophthalmology at Halle, is dead. Science owes to this indefatigable worker the classic Graefe-Saemi "Handbook of Ophthalmology"; also the recognition and operative treatment of intraocular cysticercus, extraction by a meridianal scleral incision, extirpation of the lachrymal sac and exenteratio bulbi. . . E. Slitz, formerly professor of clinical medicine at Giessen, died recently.

Miscellany.

Kernig's Sign in Meningitis.—Before the Association of American Physicians, Washington, D. C., May 2-4, in a paper on this subject, Herrick of Chicago pointed out that Kernig, in 1884, noted in cases of meningitis an inability to extend the leg when the thigh was flexed at right angle with the body, and regarded this as peculiar to meningitis, and pathognomonic. Comparatively little attention was paid to the subject until revived by Netter in 1898. Dr. Herrick's personal observations show it to be so commonly present in meningitis that, though occasionally absent in this disease and occasionally found in other affections, it is a valuable diagnostic aid.

Athletics and the Heart.—In a paper on the "Immediate and Remote Effects of Athletics on the Heart," before the recent session of the Association of American Physicians, Stengel pointed out that athletics habitually cause some dilatation of the cardiac chambers at the time of indulgence in a trying sport, and the degree of dilatation is more marked in young and inexperienced athletes than in those well trained. Occasionally, acute dilatation, sufficient to cause marked symptoms, is observed. Under these circumstances a trained athlete may recover compensation within a few days. The effect of continued indulgence in severe sports is the development of some cardiac hypertrophy, and athletes who have thus enlarged their hearts frequently suffer symptoms of overcompensation, at least during some years after they have ceased to follow athletics.

Responsibility of Water Companies.—Floyd Davis, Ph. D., in his report of investigation of the Oshkosh, Wis., public water-supply, denounces impure municipal supplies in the following language: A system of works that supplies a city with water from a source that is unquestionably contaminated, like this (Lake Winnebago), without thoroughly purifying it, should always be met with the condemnation of the people. The forcing of water that may at any time contain the fatal germs of disease through mains to a helpless and unsuspecting public should certainly be ranked with the selling of intoxicating liquors to children or confirmed inebriates. An attempt to destroy human life by systematic distribution of poison would be met by the arrest and imprisonment of the offender. Why should not the delivery of impure and death-dealing water for drinking and other domestic purposes be met and handled in the same manner, so long as it is oftentimes as fatal to the consumer as the most deadly drug?

Modification of the Army Ration.—By general orders from the war department, dated April 1, 1899, the commissary-general of the army is authorized to reduce, on the recommendation of the chief commissary of the various departments, the amount of beef issued, and in lieu thereof, to issue the equal money value of the quantity of beef thus reduced in ham or other articles of sales. The restriction now existing in regard to the issue of fish when meat can not be furnished is removed, and the ration of fish will hereafter be issued in lieu of the ordinary beef ration when desired, and to the present ration two ounces of dried fruits are added. The paragraph of the regulations which specifies the kind and quantities of the articles composing the army ration is accordingly amended as follows: Meat components in lieu of the ordinary beef ration when desired; dried fish, 14 ounces per ration, 87 pounds, 8 ounces per 100 rations; pickled fish, 18 ounces per ration, 112 pounds 8 ounces per 100 rations; fresh fish, 18 ounces per ration, 112 pounds 8 ounces per 100 rations. Fruit components: dried fruits, 2 ounces per ration, 12 pounds 8 ounces per 100 rations.

Thyroid Extract in Cerebral Case.—Loving, Columbus, Ohio, has used thyroid extract in a man 18 years of age, a student of healthy parentage, but who, in 1896, without assignable cause, began to suffer from constant headache with severe exacerbations. Within six months he found his vision affected, soon to such an extent as obliged him to suspend his studies, and later, to interfere materially with movement from place to place. With the exception of an attack of typhoid fever in his 15th year, his history is uneventful and his habits correct. Examination by competent oculists disclosed no lesion in either eye, though the vision was about equally affected in both. At a consultation between the oculists, a neurologist and a surgeon, it was decided that the patient was suffering from an intracranial neoplasm, nature and precise location not defined—suspicion of syphilitic origin. He was treated with mercurials and iodid of potassium with no beneficial result, and after a rest of some weeks treatment was resumed with negative results; tonics used with no results. Thyroid extract was prescribed and continued with a few short intermissions for several months, when improvement soon became manifest, and the patient has now so far recovered as to be able to read and write with ease and comfort. He reported the case before the recent session of the Association of American Physicians, May 2-4.

Periodic Family Paralysis.—The case of a male, aged 18 years, who at frequent but varying intervals had an attack of paralysis, has just been reported by Mitchell of Philadelphia, before the Association of American Physicians. The patient goes to

bed well but wakes in the morning helpless, paralyzed from head to foot, with total abolition of skin, muscle and tendon reflexes, loss of faradic and galvanic contractility, unchanged sensibility and unimpaired mind and speech. The attacks are hereditary in his mother's family, in which five cases are known. One of these has been seen by Mitchell. He described the others. Careful studies of the electric conditions and of urine, feces and blood, with attempts to determine their toxic effects, are given. The conclusion is that more than one kind of autotoxic material is produced, with selective actions on the skin nerves and on the spinal centers. Only three other undoubted cases of like kind have been recorded in America and about sixteen in Europe.

Uniform of Army Hospital Corps.—General Orders No. 80 from Headquarters of the Army, April 24, 1899, amend existing regulations in relation to chevrons, stripes for trousers, etc. Those affecting the uniform of the hospital corps now read as follows: Chevrons of emerald green cloth worn points down, above the elbow on the blouse, below the elbow on the overcoat; for hospital stewards, three bars and an arc of one bar inclosing a red cross; for acting hospital stewards, the same as for hospital stewards, omitting the arc; for privates of the hospital corps and all persons neutralized by the terms of the Geneva Convention, a brassard of white cloth, 16 inches long and 3 inches wide, with a cross of red cloth, 2 inches long and 2 inches wide, in center, to be worn on the left arm above the elbow. Service chevrons for enlisted men of the corps consist of a single stripe of emerald green facing cloth, ½ inch wide and 12 inches long, stitched on the outer edges with white chevron silk, and worn diagonally on both sleeves of the blouse below the elbow. To indicate service in war, the diagonal single stripe of emerald green cloth is piped on its outer side with orange facing cloth ⅛ inch wide. The stripes for the trousers are of emerald green cloth, 1¼ inches wide for hospital stewards, 1 inch wide for acting hospital stewards, and ½ inch wide for privates. No stripes will be worn on the field or khaki trousers. The badge on the cap for hospital stewards is a cross of white metal inclosed by a wreath of white metal; for acting hospital stewards and privates of the corps, a cross of white metal.

Army Medical News From Manila.—Major Samuel O. L. Potter, brigade surgeon 2d brigade of McArthur's division, reported to the surgeon-general, Feb. 28, 1899, on the condition of the regiments in his command. At the end of January the brigade was in quarters in the city of Manila, except the 1st Neb. Inf., which was in camp at McLeod's Hill, Santa Mesa. On the night of February 4, the outpost of this regiment near blockhouse No. 7 was attacked by the insurgents, and a general attack along the whole line of the brigade followed immediately. The regiments were called out from their city quarters to the line of the outposts, each leaving a detachment as an inside guard. On February 5 and 6 they advanced and occupied the pumping station and pipe line, extending across the country about eight and a half miles, a position which they held up to the end of the month. The battle casualties were 14 killed, 49 wounded, none missing. During this period the three regiments, 1st Colo., 1st S. Dak., and 1st. Neb., were in excellent sanitary condition. The food was the regular garrison issue and included fresh beef of excellent quality seven days in ten, with fresh bread and an ample supply of vegetables. The cooking is represented as having been particularly good for field kitchens. The water was from the city water-works, obtained either directly from the pipe line or hauled therefrom to the front. Detached parties sent out scouting in front of the line sometimes used surface water, but regimental medical officers did all in their power to put a stop to this dangerous practice. The clothing was excellent, and the shelter tents raised in most cases on bamboo platforms. Rice straw was used for bedding and was frequently changed. The ground in the vicinity of the sinks was carefully policed. The health of the brigade was better than at any time during the past four months, the percentage of sick being 8.5—6 in the Colorado regiment, 9.8 in the South Dakota and 10.5 in the Nebraska command. In a total of 274 cases present with the brigade, there were 52 cases of wounds and injuries, 61 malarial, 51 venereal, 38 intestinal, 27 rheumatic and 11 pulmonary. If the wounded and venereal cases were excluded, the sick list would have constituted only about 5 per cent of the command.

Pulse-Tracings.—Cushing's paper before the recent meeting of the Association of American Physicians discussed the interpretation of pulse-tracings. He finds that when the dog's heart is exposed and the ventricle is stimulated with single electric shocks, each stimulus that falls during the non-refractory period is followed by an abortive systole, which is sometimes sufficient to cause a distinct pulse in the arteries, but often fails to do so; the auricle is not affected by the stimulus, and continues to beat in its usual rhythm. The next contraction of the ventricle after the abortive systole is induced by an impulse descending from the auricle as usual, and therefore takes place at the exact time at which a contraction would have occurred had there been no abortive systole. The interval between this beat and the last normal one is therefore exactly double the pause between two ordinary contractions. If a sphygmographic tracing be taken, the pulse appears to miss one beat, and the intermission is found to be exactly twice as long as the interval between two ordinary elevations of the tracing. If the auricle be stimulated instead of the ventricle, the result at first appears the same, the ventricle contracts prematurely owing to the artificial impulse descending from the auricle, and there is either a very small undulation in the sphygmographic tracing or a complete intermission. If the duration of the intermission be measured, however, it is found to be less than double the pauses between two ordinary pulsations. In this way the examination of the sphygmogram of the dog enables one to at once determine whether the stimulus was applied to the ventricle or to the auricle, for in the first case the intermission is exactly twice as long as the ordinary interval between two pulses, while in the second case it is invariably shorter. Some consideration will show that the first proposition is true for any intermission of the pulse due to ventricular disorder; that is, any intermission of the pulse that is due to the ventricle only must be equal to twice the ordinary pause. Any intermission that is of shorter duration must, accordingly, be due to the disordered action of the parts of the heart above the ventricle, which determine the pulse rhythm. In cases of heart disease hitherto examined, the sphygmogram very often showed intermissions, which indicated that the ventricle alone was at fault, while in many others, it was perfectly certain that the intermission was due to disorder of the rhythmic parts of the heart. In some cases the pulse was so irregular that no certain conclusion could be drawn in the matter. The accurate measurement of the pulse-tracing in irregularity of the heart thus affords a means of diagnosing with considerable probability whether the ventricle or the rhythmatic part of the heart is at fault.

The Army Transport Service.—The army transport service, which was hastily called into existence in June, 1898, when the quartermaster's department of the army was required to provide vessels to convey an army of invasion to Cuba, has now attained a very mature development. Regulations governing the service have been published, and these show the thorough organization which has been perfected, by means of which 30,000 troops have been despatched from the ports of San Francisco and New York and landed in the Philippine Islands without criticism by the sensational papers of the day. The two cities mentioned are the home ports of the service each of which has its full staff of officers and employes and is provided

with proper terminal facilities, including wharfage for ships, storage for freights and suitable and adequate offices. The personnel at each of these ports consists of a general superintendent and his assistant, a medical superintendent, quartermasters and commissaries, transport surgeons, a marine superintendent, a superintending engineer and assistants, a port steward and a chief stevedore. The duties of all these officials are defined. The medical superintendent is required to be an officer of the medical department of the army stationed with the general superintendent and acting as his assistant and professional adviser in all matters pertaining to the sanitation and hygiene of the transports and to the hospital and medical accommodation and service on board. He must make personal and minute inspection of each transport on arrival and prior to departure and submit to the general superintendent such recommendations relative to sanitation and hospital equipment as he may deem needful. He must make himself familiar with all the quarantine laws and facilities that might exist at home and over-sea ports, and be responsible for the competency and satisfactory service of the transport surgeons and all other employes of the medical department of the transport service. The transport surgeons are each assigned to a vessel to act as the medical officer of the ship. Their duties are outside of those pertaining to the medical officers of the troops on board. Special regulations are published for all the movements likely to be required on active service, as for embarkation, shipping of baggage, of horses, etc., and their debarkation. The duties and responsibilities of the personnel during the voyage are specifically stated and the general routine of life on board is prescribed, including the arrangement of the messes, the necessary sanitary regulations, the precautions against fire and the action to be taken when an alarm is given.

Military Hospital at Matanzas, Cuba.—The sanitary report of Major William B. Winn, brigade surgeon volunteers, military hospital, Matanzas, Cuba, rendered April 12, 1899, describes his hospital as excellently situated on the south slope of a gradual decline from the mountain ranges to the north facing Matanzas Bay, about one mile from the city. The drainage is purely surface, but owing to the favorable location is rapidly carried off to the bay, leaving the surface and soil free from contamination. Policing is always well and carefully performed. Hospital tents are used exclusively as quarters for the men, usually four, and not more than six, men to the tent, thus allowing the most liberal air space. The hospital consists of five wards in a stone building, and twelve pavilion tents properly floored. Carefully constructed shell walks lead to and between each ward and add greatly to the attractiveness of the grounds. Experience has demonstrated most convincingly, to the surgeon in charge, the superiority of the pavilion tent ward over the use of the old buildings as hospitals for the care of the sick, no matter how carefully disinfected or reconstructed. The food-supply is ample, nutritious and of the best quality. The water-supply, from the city reservoir, is pure and limpid, but before being used for drinking purposes, it is thoroughly boiled and carefully filtered, thus eliminating all possibility of contagion from this source. All wastes, kitchen garbage and excreta are collected in large tin containers, in which a disinfectant solution is constantly kept. These tins are regularly collected each morning before 10 o'clock, again thoroughly disinfected, carefully covered with hay and then carried in wagons to the dump in the bay, two miles from camp, where they are emptied and, after careful washing, are returned to the hospital. This system has proved most satisfactory and is believed to be the best and most practical method of disposition of refuse. The record of this hospital is one of unusual excellence, if judged by the death-rate—one death only (yellow fever civilian) in three months, with a daily average presence of sixty-five patients during this time. Two cases of yellow fever have been treated, the first from the Second U. S. Cavalry, the other a photographer, bought to this hospital in the last stages of the disease, as a sanitary measure and precaution against certain wide exposure in the center of the city, where he was ill. Both were isolated and no further case has resulted. Several cases of typhoid fever have been treated at the hospital. These undoubtedly originated within the One Hundred and Sixtieth Indiana or Eighth Massachusetts Volunteer Infantry at their camps in the United States and were brought to the island by the troops. Radical measures adopted at the hospital and within the camp, under the watchful direction of the general commanding the district, promptly checked further spread of the disease beyond those already infected before going into camp here. Too much praise can not be given the zealous and indefatigable sanitary precautions insisted upon by the commanding general, which the unprecedented record of the camp at Matanzas fully confirms.

Tumors of Cerebellum, Optic Thalamus and Frontal Lobe of Cerebrum.—J. Risien Russell, in the *Clinical Journal* (London) of April 12, reviews the differential diagnosis of these tumors, which, though widely separated in the brain, yet have important anatomic connections and clinical features in common. The growths in these three regions are alike to some extent, in their symptoms of ataxia and nystagmus; absent knee-jerk and anosmia are symptoms common in cerebellar and frontal tumors, while mental defect and loss of sphincter control are met with in growths in the frontal and thalamus opticus tracts. Incoordination and nystagmus, however, are far more frequent and pronounced with cerebellar tumors than with those in either of the two localities, and a special attitude of the head, the cheek down on one shoulder with the chin to the opposite side, is almost peculiar to cerebellar involvement. Anosmia, on the other hand, is not especially frequent in cerebellar tumor and naturally very frequent with that of the frontal lobe. Loss of knee-jerk, Russell finds from experience, is not especially diagnostic of any particular locality. Mental defect is chiefly characteristic of tumor of frontal lobes, and its early occurrence is especially diagnostic of this location. If aphasia be present, it indicates involvement of post-frontal regions, presumably in the left hemisphere. Loss of sphincter control, generally due to mental hebetude, is most common with frontal tumors. Fits generally point to cerebral disease; those of cerebellar origin rather resemble tetanus seizures than those of cerebral origin, and in any case are exceptional. Hemiplegia can only occur with frontal tumors from pressure on the Rolandic region or extension of the growth to the same, and the arm is usually most affected. When hemiplegia occurs from thalamic growths the same is likely to be the case, and curiously enough, when paresis occurs in man from cerebellar lesions, it is worst in the arm, reversing the experimental results in the lower animals, where the hinder limb on the side of the lesion appears to suffer most. Hemiplegia from these tumors is commonest with thalamic growths, less so with frontal and very rare with cerebellar tumors. Facial paralysis is a valuable indication in these locations of tumors. Tumors of the frontal lobes or of the thalamus can cause facial paralysis of the cerebral type, that is, involving solely or chiefly the lower half of the face. Cerebellar tumors can only cause this paralysis of the peripheral type, that is, involving the whole face, and this by pressure on the facial nerve between the pons and the internal auditory meatus. In such cases the paresis, if general, involves the same side of the body as that of the lesion, the cerebellar fibers not crossing like the cerebral ones. Frontal and thalamic tumors may also, exceptionally, cause facial paresis of the peripheral type, by general increase of the cranial pressure, but it is not so marked or frequent as that from those of the cerebellum. Defect of hearing is also more indicative of cerebellar disease than of the other localities. Russell does not value optic neuritis as a local diagnostic sign as much as formerly, though it is still of importance. In cerebellar tumor it generally appears early, is severe and attended with marked swelling of the discs. An inequality in the two sides points rather more to the cerebral than to cerebellar lesions. Altera-

tion of the visual field is not significant of frontal or cerebellar tumors, and hemianopia is rarely noted in connection with those of the thalamus. It may be due to optic neuritis as well as to cerebral disease, and this should be kept in mind. Anesthesia, if present, would favor thalamic rather than frontal or cerebellar lesions, as it might occur from implication of internal capsular fibers. Cerebellar disease may cause paralysis of ocular muscles by pressure on the cerebral nerves, the sixth more frequently than the third, or it may be by secondary implication of the pons. Ocular paralysis is not apparently common with frontal lobe tumor except as a result of general intracranial pressure. The muscles most likely to suffer are the external recti, causing convergent squint. Conjugate deviation away from the side of the lesion, due to a simply irritative lesion of the eye muscle cortical center has been seen in connection with the frontal lobe tumors, but conjugate deviation toward the side of the lesion from paralytic injury of these centers is rare with these growths. Other slight ocular muscle defects, such as slight impairment of upward movement, etc., have been met with with frontal tumors, but their significance is not quite clear. Ptosis has been observed as a late symptom of thalamus tumors.

Washington, D. C.

Health of the District.—The report of the health officer for the week ended April 22 shows the total number of deaths to have been 95, of which 52 were white and 43 colored. There were four deaths from cerebrospinal meningitis, 2 from diarrhea and 1 each from diphtheria, measles and whooping-cough. At the close of the week there were 30 cases of smallpox, 19 of diphtheria and 37 of scarlet fever under treatment.

Bacteria in Milk.—The members of the special committee of the medical society, S. S. Adams, G. M. Koeber and E. A. de Schweinitz, have been studying the bacteriologic qualities of cow's milk used in the District. Recent reports of the results in April and May, 1898, and January, 1899, show that of 31 samples of milk secured at random from dairy wagons of the city, 1 showed 4000 bacteria per c.c.; 1, 2500; 5 between 10,000 and 15,000; 6 between 30,000 and 50,000, and the remainder from 50,000 to 150,000 per c.c.

Central Dispensary and Emergency Hospital.—The annual banquet of this institution took place on April 27. The six members of the attending staff were present, with thirty-one members of the assisting staff. At the annual meeting of the trustees, held April 28, Drs. J. Ford Thompson, D. W. Prentiss and H. L. E. Johnson were elected for three years as members of the attending and consulting staff. Miss Eva Simonton, superintendent of the hospital and nurses' training-school, has resigned her position and will make an extended tour in Europe to make a special study of hospitals and training schools.

The Public Service.

Movements of Army Medical Officers under orders from the Adjutant-General's Office to April 27, 1899.

Chas. L. Baker, acting asst.-surgeon, from the 2d army corps, Camp Mackenzie, Augusta, Ga., to Washington, D. C., reporting by letter to the surgeon-general.

Geo. M. Bradfield, acting asst.-surgeon, from Washington, D. C., to New York City, for assignment in the Dept. of the East.

Chas. Browning, acting asst.-surgeon, from New Orleans, La., to Havana, Cuba, for assignment in the Div. of Cuba.

Chas. R. Greenleaf, colonel and asst. surgeon-general U.S.A., from Washington, D. C., to Savannah, Ga., to superintend the sanitation of the camps near that city.

Edwin P. Hayward, acting asst.-surgeon, from Washington, D. C., to San Francisco, Cal., for assignment in the Dept. of California.

Randall R. Hunter, major and brigade surgeon Vols., sick leave granted.

Wm. L. Kneedler, major and brigade surgeon Vols. (captain and asst.-surgeon U.S.A.), honorable discharge from the volunteer service to take effect June 30, 1899; relieved from duty in Pinar del Rio, Cuba, to report to his proper station, West Point, N. Y.

Ira B. Ladd, acting asst.-surgeon, from Manila, P. I., to San Francisco, Cal., reporting to the chief surgeon for annulment of contract.

Clarence H. Long, acting asst.-surgeon, from Gainesville, Ala., to Havana, Cuba, for duty in the Div. of Cuba.

Thos. C. McCleave, acting asst.-surgeon, from New York City to San Francisco, Cal., for duty in the Dept. of California.

Sidney J. Meyers, acting asst.-surgeon, former orders amended so as to direct him to proceed from Camp Columbus, Havana, Cuba, to Savannah, Ga., thence to Louisville, Ky., reporting by letter to the surgeon-general.

Alex. Nettleroth, acting asst.-surgeon, from Matanzas, Cuba, to Ft. Thomas, Ky., reporting by letter to the surgeon-general.

William W. Quinton, captain and asst.-surgeon U.S.A., leave of absence granted.

M. W. Rainold, acting asst.-surgeon, from Savannah, Ga., to Havana, Cuba, for duty in the Div. of Cuba.

Frank Roberts, acting asst.-surgeon, to proceed to Marshall, N. C., reporting by letter to the surgeon-general.

Edw. P. Schreiner, lieutenant and asst.-surgeon U.S.A., from Plattsburg Bks., N. Y., to San Francisco, Cal., for duty in the Department of California.

Movements of Navy Medical Officers.—Changes in the medical corps of the U.S. Navy for the week ending April 29, 1899.

P. A. Surgeon G. H. Barber, detached from the naval academy May 1, and ordered to the "Monongahela."

Asst.-Surgeon R. C. Holcomb, detached from the naval academy May 1, and ordered to the "Monongahela."

Marine-Hospital Changes.—Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the U.S. Marine-Hospital Service, for the seven days ended April 27, 1899.

Surgeon Preston H. Bailhache, granted leave of absence for thirty days on account of sickness.

Surgeon W. A. Wheeler, granted leave of absence for twenty-seven days from June 4, 1899.

Surgeon C. E. Banks, to proceed to Vineyard Haven, Mass., New York City, and Baltimore, Md., as inspector.

P. A. Surgeon W. J. Pettus, to report to chairman of board of examiners at Washington, D. C., on May 16, 1899, for examination to determine fitness for promotion.

P. A. Surgeon G. M. Magruder, to report to chairman of board of examiners at Washington, D. C., on May 16, 1899, for examination to determine fitness for promotion.

P. A. Surgeon J. J. Kinyoun, to report to chairman of board of examiners at Washington, D. C., on May 16, 1899, for examination to determine fitness for promotion.

P. A. Surgeon J. J. Kinyoun, relieved from duty as director of the hygienic laboratory, Washington, D. C., and directed to proceed, not later than June 1, 1899, to the San Francisco quarantine station and assume command.

P. A. Surgeon C. P. Wertenbaker, to report to the governor of Virginia for special temporary duty.

P. A. Surgeon J. C. Perry, to assume temporary command of the service at Port Townsend, Wash., during the absence of P. A. Surgeon C. H. Gardner.

P. A. Surgeon M. J. Rosenau, upon being relieved from duty at Santiago, Cuba, to proceed to Washington, D. C., and assume charge of the hygienic laboratory as director.

P. A. Surgeon J. M. Eager, to proceed to Evansville, Ind., and Cincinnati, Ohio, as inspector, and to Louisville, Ky., as inspector of unserviceable property.

Asst.-Surgeon H. B. Barker, to proceed to Santiago, Cuba, and report to P. A. Surgeon M. J. Rosenau for duty.

Asst.-Surgeon M. H. Foster, to proceed to the Brunswick, Ga., quarantine station for special temporary duty.

Asst.-Surgeon L. L. Lumsden, relieved from duty as sanitary inspector on the U.S. transport "Logan," and directed to report to the medical officer in charge of the Savannah quarantine station for temporary duty.

Asst.-Surgeon L. L. Lumsden, to report at Washington, D. C., en route for Seattle, Wash.

Asst.-Surgeon Carl Ramus, to proceed to Norfolk and Portsmouth, Va., for special temporary duty.

BOARD CONVENED.

Board convened to meet at Washington, D. C., Tuesday, May 16, 1899, at 10 o'clock A.M., for the examination of passed asst.-surgeons to determine their fitness for promotion to the grade of surgeon. Detail for the board: Surgeon Chas E. Banks, chairman; Surgeon J. H. White, and Surgeon P. M. Carrington, recorder.

RESIGNATION.

Surgeon W. A. Wheeler, resignation accepted, by direction of the President, as tendered, to take effect June 30, 1899.

CHANGE OF ADDRESS.

Allen, H. H. R., from 21 W. 13th to 1320 N. Del. St., Indianapolis, Ind.
Brener, C. H., from Chicago to Colorado Springs, Colo.
Breniman, E. M., from 308 S. Robey to 642 Congress St., Chicago.
Baylis, W. F., from New Orleans to Estabutchie, La.
Brown, H. H., from 491 Dearborn to 838 N. Park Ave., Chicago.
Coen, C. M., from Chicago to Mendota, Ill.
Councill, M. S., from Odessa, Del., to Bryn Mawr, Pa.
Crume, G. P., from 240 Chestnut St. to 174 E. Chicago Ave., Chicago.
Corwin, A. M., from 691 Harrison St. to 301 Ashland Boul., Chicago.
Clements, G. E., from 757 W. Monroe St. to 398 Marshfield Ave., Chicago.
Clough, J. A., from Pepin to Spring Valley, Wis.
De Pew, F. L., from Mill Grove to Altamont, Mo.
De Vaux, F. H., from Davenport to 700 E. 6th St., Des Moines, Iowa.
Eskridge, J. H., from 831 43d to 4242 Halsted St., Chicago.
Foster, F., from Park Hotel to Protestant Hosp., Columbus, Ohio.
Goetsch, G. A., from 857 W. North Ave. to 103 State St., Chicago.
Gooch, W. H., from Goldsberry to Elmer, Mo.
Hegele, H. W., from 697 Jackson Boul. to 201 Lincoln St., Chicago.
Hilliard, T. R., from Chicago to Eau Claire, Pa.
Jacobson, T. T., from 306 Perry to 841 Woodland Ave., Cleveland, Ohio.
Jones, E. A., from Baltic, S. D., to Ft. Dodge, Iowa.
King, T., from Wingham, Ontario, to Hughes Bldg., St. Joseph, Mo.
Knowlton, C. D., from 18 Hancock to 574 Warren St., Roxbury, Mass.
Kay, A. E., from 1707 Harrison to 1481 Monroe St., Chicago.
Long, H. E., from County Hosp. to 158 W. 3d Ave., Denver, Colo.
Love, L. F., from 4107 Chester Ave. to 826 S. 49th St., Philadelphia, Pa.
Lyman, T. P., from 2159 Adams to 2124 Wilcox St., Chicago.
Lewis, Denslow, from 217 53d St. to 5100 Madison Ave., Chicago.
Moore, F. D., from 430 Claremont Ave. to 411 S. Oakley Boul., Chicago.
McKivitt, W., from St. Louis, Mo., to Milwaukee, Wis.
McElfresh, C. H., from St. Louis, Mo., to Dawson, Ill.
Monash, B. F., from Des Moines, Iowa, to 36th St. and Vincennes Ave., Chicago.
McGauran, G. D., from New York City to Lawrence, Mass.
Means, C. S., from Philadelphia to Towanda, Pa.
McLaren, J. L., from Santa Barbara, Cal., to Saginaw, Mich.
Priolean, W. H., from 242 W. 43d to 31 W. 61st St., New York City.
Porter, J. W., from Atlanta, Ga., to 316 Sheely Blk., Omaha, Neb.
Potter, J. Y., from Chicago to New London, Wis.
Ramsey, F. P., from Chicago to Rapid City, Mich.
Reece, W. C., from St. Louis to Elvins, Mo.
Strohecker, S. M., from Chicago to 319 Franklin St., Reading, Pa.
Smith, W. F., from Chicago to Bippus, Ind.
Southall, P. T., from Amelia C. H., to Williamsburg, Va.
Straw, E. E., from Vinita, Ind. Ter., to Masonic Temple, Ashland, Wis.
Sharp, J. L., from New Orleans to Furrh, La.
Valentine, F. C., from 242 W. 43d to 31 W. 61st St., New York City.
Van Camp, J. E., from Plainfield to Carlisle, Pa.